

THE

MACazine



Volume 3 No. 2 The Macintosh™ Magazine for the Rest of Us

\$2.75/Canada \$3.75

THE POWER OF DESK ACCESSORIES

The screenshot displays four application windows on the Macintosh desktop:

- MACazine**: A window titled "MACazine" showing a small icon of a floppy disk labeled "The MACazine".
- ClickOn Worksheet**: A window titled "Untitled" at 10:16:12 AM. It shows a pie chart titled "ClickOn™ Graph" with data from 11:00 to 11:20. Below it is a "Calendar" for Friday, October 25, 1985. To the right is a "ClickOn™ Worksheet" with a numeric keypad and a table:

	A	B	C	D	E
1	42	\$.89			
2	44	\$.78			
3	46	\$.90			
4	78	\$.45			
5	95	\$.23			
6	23	\$.34			
7	45				
- ClickOn Graph**: A window showing a pie chart with segments labeled from 11:00 to 11:20.
- Maccountant**: A window titled "Your Company" showing various financial icons and categories: Company Folder, Chart Of Accts, Departments, Non Cash Journal, Sales/AR, Purchases/AP, Cash In Bank, and Cash In Bank.

Integration on a One-Disk Budget

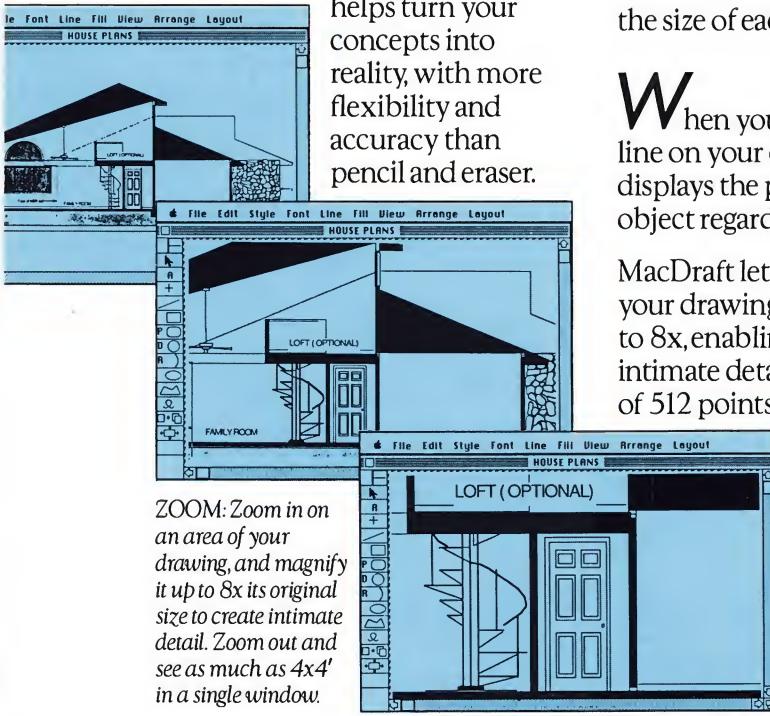
Small Business Accounting: Maccountant

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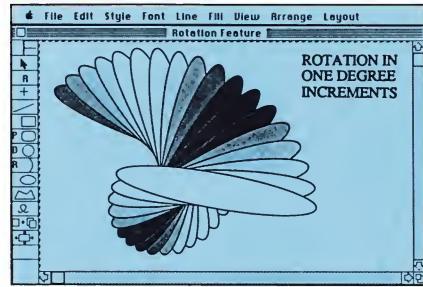


ZOOM: Zoom in on an area of your drawing, and magnify it up to 8x its original size to create intimate detail. Zoom out and see as much as 4x4' in a single window.

MacDraft offers a full complement of commonly used scales. Each has its own grid network. You create a library of frequently used shapes in any scale, copy and paste those shapes from one scale to another. Sizes will automatically be adjusted to the new scale. Work in decimals, fractions or metrics. Line lengths and angles are displayed to scale throughout the drawing process. This saves the task of computing the size of each object.

When you place a dimension line on your drawing, MacDraft displays the proper size of the object regardless of the scale.

MacDraft lets you zoom in on your drawing and magnify it up to 8x, enabling you to draw in intimate detail. With a resolution of 512 points per inch, you draw with amazing precision. Zoom out and see as much as 4x4' in a single window. You maintain full drawing capabilities at any view.



ROTATE: Turn objects the way you want them, 1° at a time, through a 360° cycle.

Objects can be rotated singly or in groups, 1° at a time, through a full 360°. This allows you to place objects anywhere on the document with incredible precision.

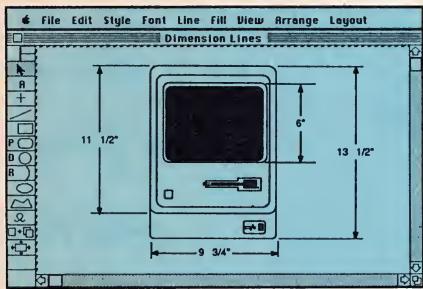
MacDraft allows you to automatically distribute multiple objects along a line—even if those objects are not the same.

Create rectangles with rounded corners. The corners are in proportion to the rectangle's size to prevent distortion. Dynamically change the radius of these corners to any size, based on scale.

Draw circles in one of two easy ways. To project between two points, choose circle by diameter. To project about a center point, choose circle by radius. Draw arcs in 2 ways: 1—Define the length

of the radius and project the arc to the desired angle; 2—Define any three points the arc passes through.

For irregular shapes use MacDraft's polygon and freehand drawing tools, including dynamic editing and automatic closure. MacDraft will smooth your polygon or freehand shape to give you a contoured effect. Add line segments to your polygon or extra points to your freehand shape after each has been created.



DIMENSION LINES: MacDraft will display the proper size of the object, regardless of the scale of the drawing.

The continuous drawing mode allows you to maintain the flow of drawing. If you draw beyond the current viewing window, MacDraft will automatically scroll in that direction.

MacDraft offers 9 different line styles including thick, thin and even --- dashed. Sophisticated text-editing lets you type letters, numbers and punctuation. These can be displayed in a variety of types and sizes.

MacDraft conforms to the Macintosh™ concept of copy and paste, allowing you to paste in objects from other applications such as MacPaint™ and MacDraw™.

Incredibly, MacDraft is only \$239. A good old-fashioned value that just may convince you to put away your drafting pencil. Forever!

	Fill pattern and line style indicators.
	Pointer selects, edits, moves objects
	Text editing and insertion mode
	Draws horizontal or vertical lines
	Draws diagonal lines
	Draws square-cornered rectangles
	Draws rounded-corner rectangles w/proportional or constant radii
	Draws circles by diameter or radius
	Draws arcs by radius or 3 points
	Draws ovals
	Draws polygons
	Draws freehand shapes
	Duplicates selected objects
	Moves the viewing window

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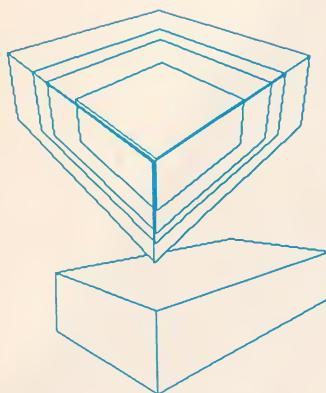
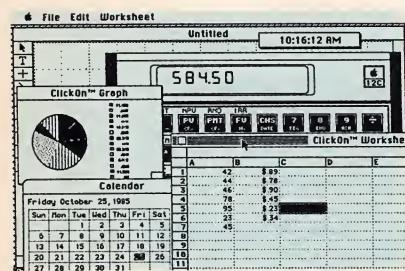
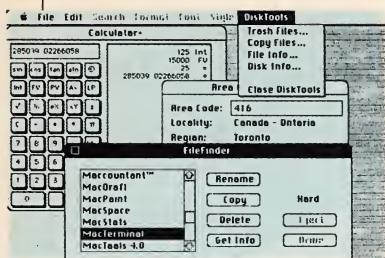
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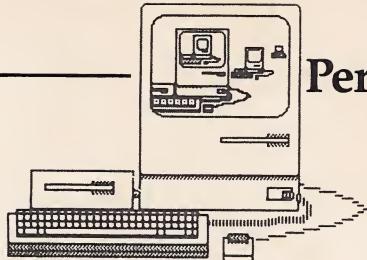
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Perspective

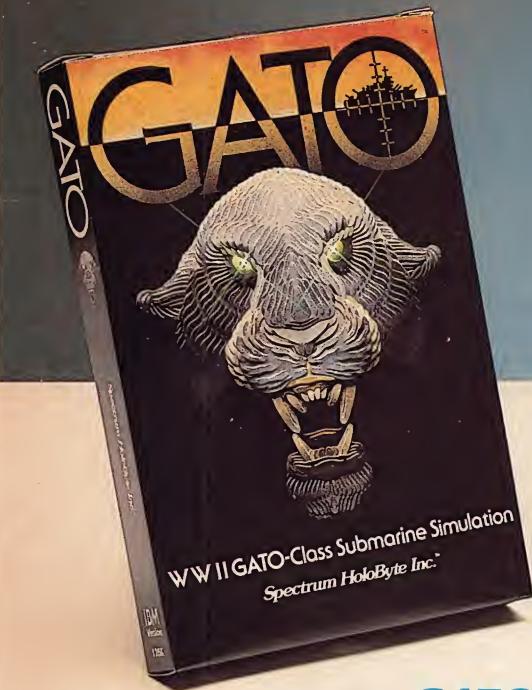
The Window of Educational Opportunity

Some months ago, high on the promise of the Mac's educational potential and Blue Chip Software's approach to educational applications, notably through its "Blue Chip Challenge," we proposed the establishment of a National Blue Chip Challenge along the lines of the National Spelling Bee competitions as vehicle for awakening both Apple and its third party developers and the educational community to the tremendous potential of the Mac as an educational tool in non-traditional applications. The fact that nothing has yet come of the proposal has done nothing to dampen our ardor for the concept of revitalizing the American educational system through the development of a new Macintosh-based approach to curriculum. Why, for example, can't we begin to recognize the abject waste of limiting the computer to programming, remedial and babysitting applications? Why can't we recognize the promise of an educational environment in which the computer is ubiquitous in presence and inspired in application, with campus networks, libraries linked to research database facilities, chemistry, physics, biology, economics, history, auto mechanics and all the rest of the curriculum supported by computer simulations, and why can't Macs replace IBM typewriters in typing classes? Why can't we begin to DO that little . . . and more? Money won't be the limitation on the visionary Board of Trustees . . . and if not money, then what?

Unfortunately, the educational establishment, with few (but increasingly more frequent) exceptions has proven to be as reluctant to change as has the Fortune 500, and the current best hope for change in the educational uses of computers in schools appears to be the continuing "infiltration" of the Mac into an ever increasing number of campuses and districts by dedicated Mac "champions" . . . a group which has had precious little in the way of support or encouragement from Apple and its developers . . . at last in the K-12 area.

We find the lack of support unfortunate, but we do see reason to be hopeful. We believe that 1986 will be a window year for the Mac to begin a better focused move into the campus and classroom . . . a move which can have revolutionary impact on the educational institutions and processes of this country. But, it won't happen without greater attention from Apple and its third party developers . . . and without the attention, the window of opportunity will close . . . or be closed by less worthy (but more visionary) competitors.

We don't want to see that happen, and would propose the creation of a national clearinghouse for Macintosh-oriented educational applications and concepts . . . a resource facility which would provide Apple, its developers and educators, parents and students with the support which will be required for the fulfillment of the Mac's educational promise. While the concept is presently in the germinal stage, we would invite interested parties to call or write The MACazine to express their support or disagreement . . . we should begin the dialogue while the window remains open. We owe it to our children.

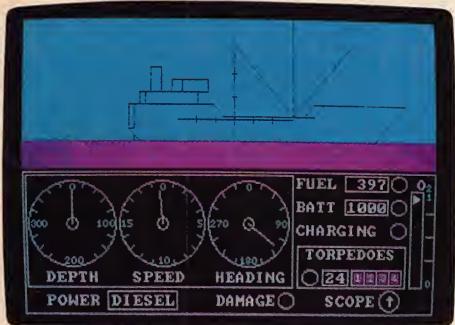


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(IBM requires 128K, color graphics card, graphics monitor, double-sided drive. Apple IIe™ or IIC™ requires 128K, single-sided drive. Joystick optional. Macintosh requires 128K.)

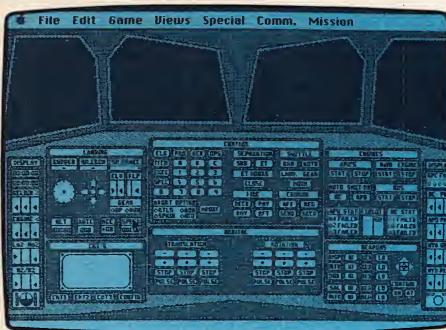


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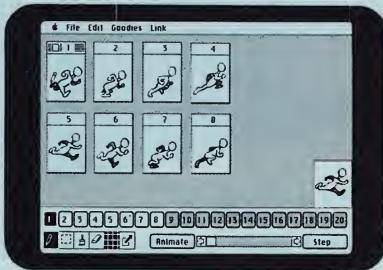
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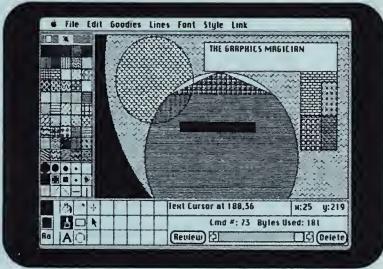
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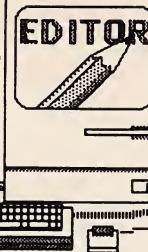
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Editorial

Everyone claims that the power of the Macintosh lies in its desk accessories and we have to agree. By combining various accessories under your Apple menu with your applications, you and your Mac can become a formidable team. Howard Bornstein, William Lathrop and Steven Schwartz tell you all about it in *Desk Accessory Power*, *More Desk Accessories* and *Desk Accessories in Review*. For our readers who are using a single-drive Macintosh, J. Michael Dlugos from the Victoria M.U.G. in Canada shows you how desk accessories can streamline your operations in his story, *Integration on a One-Disk Budget*.

This is also the year for accounting software. We continue our exploration of packages available for the Macintosh with C.P.A. John C. Mitchell's opinion of *Maccountant*. John normally uses "those other computers," but he found this package to be an excellent general ledger program for Macintosh users.

It is also the year for stargazing. Check out the other astronomy packages reviewed by George Litterst in *Comet Halley*, who this month turns his eyes heavenward while he listens to more music on the Mac in his *Well-Tempered Mac* column. And although *MacSpin* was not created exploring the heavens, Michael Holloway found this statistical analysis program with its planetarium-like graphics to be an information observatory.

With spring just around the corner, it's time to hit the road again. Accompany John Lincoln in *On the Road* as he visits Expertelligence and Maitreya Design to find out what they are all about. And if you tend to get lost, you may want to take Michael's story about *MacAtlas* with you.

We've been reading about the fantastic sound features in the Macintosh, and this month we learn from Hartley and Patricia Lesser how the new *SmoothTalker* helps you enhance your productivity and improve learning by talking to you.

For your entertainment and relief from being so productive with your Macintosh, we bring you *The Crimson Crown* by the Lesser team, *Hippo Almanac* by Steven Schwartz, and *Strategic Conquest* in Joel Reid's *Gaming on the Mac* column.

Charlie Jackson writes more on *What's Hot and What Not* and Mark Veljkov brings us up to date on the AUC happenings. Dave Redhed fills us in on the kind of support that is being generated for all Lisa and XL orphans and Ebbe Ebbesen reports that things are coming together for MUG members because of new activity at Apple. Our new Book Review Editor David Clark will be bringing you in-depth reviews on the flood of business, graphics, technical and financial books for Macintosh users. This month he reviews *MacGraphics for Business* by Jerry Mar. Dialog Boxer Russ Schnapp addresses the needs of Skinny Mac users when he talks about fattening your Macintosh.

Keep those cards and letters coming and tell us what you need and want. This is your MACazine!

A handwritten signature in black ink, appearing to read "Robert S. Lathrop".

How can we price our high-quality Mac programs so low? The reason is simple. Our programs are so superior that once you have purchased one, you will want to purchase others! Your repeat business assures us volume sales, thus allowing us to bring you more low-cost software. Try us — you'll see!

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"It's refreshing to see people able to dream big without pricing to match!"

— The MACazine,
April '85

"The company will maintain a \$39.95 price policy for everything. Check it out." — John Dvorak, InfoWorld, June 17 '85

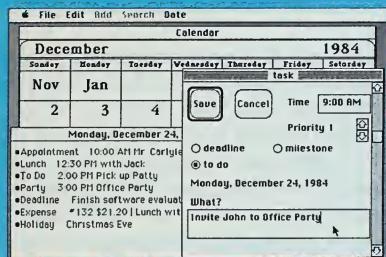
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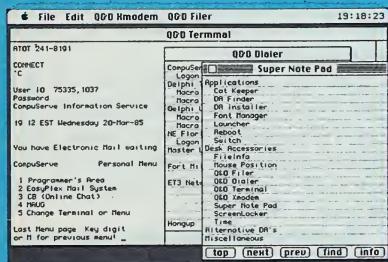
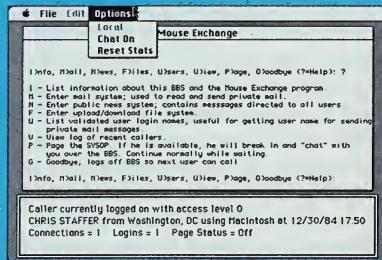
Day Keeper™ Calendar. This program helps you organize your day to day appointments, goals, expenses, and customer billing. It makes personal time management easy with flexible reporting and sophisticated searches. Day Keeper is designed for the individual who needs easy and complete time accounting. Works on the 128K Macintosh, and with 'Switcher' — takes advantage of the larger screen on the Macintosh XL.

"One of the finest application programs on the Mac; a bright, breezy bit of programming whose very friendliness and usability belie the underlying complexity of the programming and power of technique."

— Neil Shapiro, Sysop MAUG. "Day Keeper is a pure calendar-oriented program, a single application = lower cost...the programmers were able to focus all attention to the detail of 'the calendar,' so the application itself exhibits a jewel-like polish in its operations" — The MACazine, May '85.

Mouse Exchange™ BBS A remote bulletin board system that has security for private mail, plus a public news system. Upload and download files in ASCII, XMODEM, or MacBinary. It uses multiple windows. Works on the 128K Macintosh, requires an Apple, Hayes, or US Robotics modem. "...(Mouse Exchange BBS) is already a classic in telecommunications." — The MACazine, April '85. "Almost all of the Mac boards that are up use this package." — John Dvorak, InfoWorld, June '85.

Mouse Exchange™ Terminal. This program is a simple, yet sophisticated terminal emulator from the people who brought you 'Free Term' on Apple's software supplement. It emulates multiple types of terminals, has a built-in screen editor, and easy-to-use macros and dialer functions. Upload and download in ASCII, XMODEM, and MacBinary. Works on the 128K Macintosh, and with ALL modems.



Quick & Dirty™ Utilities Volume One and NEW! Volume Two. Both disks are full of useful desk accessories and application tools. Volume One has 16 different utilities, including VT52 and XMODEM terminal desk accessories, super note pad, font manager, disk cataloger, and much more! Volume Two includes an editor desk accessory, a BASIC desk accessory, a pie & bar chart creator, mass disk copier, desk accessory maker, and many other goodies! Some individual utilities may require 512K RAM. "Now, let it be said that 'Quick & Dirty' has nothing to do with how these utilities act or are programmed. Instead, it seems to mean that they're quick to use and they get the job done without many flourishes but with a good, workmanlike attitude." — The MACazine, April '85. "Quick & Dirty Utilities is a disk chock full of the handiest programs you have ever bought...you'll wonder how you got along without (them)." — MacUser, Premiere Issue '85.



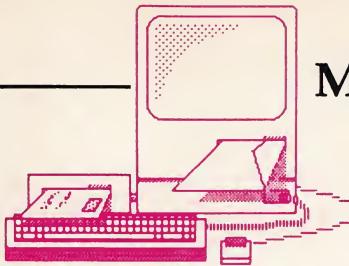
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MAC Mail

Sweepstakes Winners Respond

I just received the news of my having been drawn as Reserve Grand Prize winner in The MACazine's Fall Sweepstakes! I am so excited! And what a splendid and generous prize!

Since you mentioned in your letter that the software packages awarded would be selected especially for me, I thought maybe I ought to tell you a little about myself and what kinds of things I'm into on my wonderful MACintosh XL.

I'm a scriptwriter and book author for SESAME STREET—working in MacWrite. The wonderful graphics of the Mac make it possible for me to illustrate my scripts and book manuscripts before submitting them to my publishers or my producers. (By the way, I'm beginning to hear about the advantages of moving up to Microsoft Word and a new program called SCRIP-TOR, expressly for script writers like myself. Have you heard about SCRIP-TOR? Is it available yet? It sounds like an absolute godsend with all the formatting necessary in scripts. Do you have to have WORD in order to use SCRIP-TOR? That's another rumor I heard. I'd love it if you'd send me any information you have about this.)

Anyhow, I'm also just beginning the writing on a major two-hour movie for CBS television, starring Tyne Daly, planned to go before cameras in the spring and on the air next fall.

I am also into lots of recreational uses of my MAC—including making wonderfully elaborate flyers for our local Gilbert and Sullivan Singing Group and our Square Dance Club. I have also designed several fancy birthday cards which I adapt and send out each month to a couple of hundred mentally handicapped children all around the country. Obviously working with graphics and MacPaint is a big love of mine. I am a Fonts nut (hooray for Fluent Fonts and Mac the Knife-2) and my favorite disks to work with are Mac the Knife and Paste Ease.

I don't do any spread-sheet or accounting work at all. But I do have the MegaFile and MegaMerge systems because I do a tremendous amount of volunteer work with several organizations for mentally retarded children. My annual Xmas card list is over 600 by now because of all of my contacts and associations within the world of help for retarded children. So a mail-merge program has become essential for me.

I hope this gives you a little picture of

me and my peculiar interests. I really appreciate the fact that you intend to select the prizes in this contest for special appropriateness to the personalities of the winners. I think that shows a real consideration of people's individual interests and areas of concentration.

My little son, who is mentally retarded, was drawn as a winner in a contest once which had several software programs as a prize. No one made any attempt to find out who he was or what programs would be interesting or useful to him. The software that was awarded to him was completely inappropriate to his age and his abilities. There exist hundreds of programs that would have been wonderful for him—but nobody attempted to find out what he would have liked and benefited from. I'm grateful that you are not taking that careless attitude in awarding your prizes in this contest.

Once again, my deep thanks for this generous gift. I am thrilled to have been chosen. And thanks for your splendid magazine which I look forward to every month with great excitement. Keep up the good work.

Emily Perl Kingsley
Chappaqua, NY

Needless to say, we were *thrilled* to receive the letter from you congratulating us on being your Grand Prize Winners in The MACazine Contest. I never expected to win anything let alone this much.

We have been Macintosh supporters from the very beginning, buying ours in March of 1984. We had to wait a month to get it then. I have been very happy with it as I have been with your magazine. Your magazine contains a great deal of information on educational uses of the computer besides the business uses. It also tends to keep up the news of what is going on in the academic settings.

I am waiting anxiously for the delivery of the prizes. I would never have been able to afford a hard drive or half of the other things in the package.

Thank you so much for your help, and again, we are very excited about being chosen, in fact, I think I have made more typos on this letter than I have for the last month.

Marvin W. Williams
Yuma Proving Ground, AZ

Using Font/DA Mover

I got the November MACazine today and have read with interest the Tip of the Month on page 46. Yes, it is a very good idea to put the desk accessories into the Resource if they are only of use in that particular resource/application. However, you don't need to use the Resource Editor to do it and therefore you don't have to

run the risk of screwing anything up.

The solution is to use the Font/DA Mover. Yes, it is a hidden option, like all good Macstuff it's NOT documented. Firstly run the Font/DA Mover holding down the option key. This will let it default to Desk Accessories. At this stage you should have the DA's in the system in the left window. Now hold down the option key again and select open in the right-hand Open button. You will get a list of ALL files on the disk. Say you want Word Count in MacWrite just select MacWrite and copy word count from either the DA file or if it's in the System from there. And that is all there is to it!

The same formula applies to Fonts. If you have more than 11 fonts and you run MacDraw the extras disappear down under the Font Sizes. If you install the fonts that have disappeared into MacDraw using the method described above, every time you run Draw they will be read in before the System Fonts and will be at the top of the Menu.

The mag is terrific—keep up the good work—and a happy Christmas.

Peter Trinder
Sunningdale, England

Thanks for MUG Shots

A week or two ago I wrote you with a problem I had trying to make contact with the San Diego MUG. I had written them for information about their group, enclosing a SASE, and expecting only an application blank. When I had not heard from them in over a month, I wrote to you to ask if I had misunderstood the operation of user's groups.

Two days ago I received not an application, but a copy of their publication and a very nice letter. I feel welcomed, and now have a method of making contact with other solo individuals who are struggling to master their Macs.

Thank you for your time and trouble, and for your magazine.

Lawrence Preuss
Ann Arbor, MI

Educational Help?

Since last February we have read MACazine and really like it—MACademia is the first article that is read! We would like to inquire if you know about a good: (1) Latin program—to study Latin and also put in your own daily vocab, grammar, etc., (2) we would like to learn the basics in Chinese—Mandarin, and (3) would you know a supergood world history program—9th grade?

I personally would give a three or four year old child a 512K Mac. Every child should grow up with a Mac, but you would be surprised to encounter the "hostility" of mothers. So, I keep silent and en-

joy keeping in touch with a more enlightened group of people via reading MACazine (in the closet!)

Please keep your sparkling articles wheeling into our minds! Thanks so much and best wishes!

P.S. Do you hear anything about "Jonathan" to be released in February of 1986 or so?

Mrs. C. Millan
Sacramento, CA

Reader Suggestion

Here's a couple of ideas for you.

How about a review of some of the clip art packages that are available now; there seems to be a lot of them out there. Information on artistic quality, quantity of images, and content would be helpful.

On a larger scale, why not database your magazine? I find myself digging through old copies to find a review, a tutorial, or even a tip from one of your readers. Maybe one of the information services would be interested. Do it, before "Someone Else" does.

Whitney M. Johnson
Albuquerque, NM

Algebra Help

My dad just bought a really neat program called PowerMath. It does my algebra homework and my dad uses it at work. He is a civil engineer. I saw your little notice in PRODUCTS OF THE MONTH but I have never seen anything else written about it. I think PowerMath is so great that you should tell everybody.

Linda Tompkins
Sherbourne, MS

MacInTouch

Thank you for the mention of MacInTouch, our newsletter for Macintosh professionals, in the "What's Hot" section of your Vol. 2, No. 11 issue. Unfortunately, there was no address or phone number given. Here it is, for your readers who might like more information:

MacInTouch
Ford-LePage, Inc.
P.O. Box 786
Framingham, MA 01701
(617) 527-5808

(The newsletter is \$48/year and is published monthly. It is 40 pages in length with no advertising.)

Keep up the good work.

Ric Ford
Framingham, MA

An Orphan Speaks Out and Dave Responds

I'm writing in regards to my previous letter in which I lambasted Apple for not being attentive to the Lisa/MacXL owners with respect to the migration package as well as the price of replacement software. I

would like to apologize to Apple for my lack of faith in them as a company. I will, from now on, wait to hear from Apple with respect to information on Apple products and/or service and not rely on magazines which create news if they have none to share.

We the computer public rely on receiving information from many sources, the most common being the computer specialty magazine. If we cannot completely trust the articles you write or if such articles are misleading either by design or accident, then you invalidate yourself and serve no useful purpose to the industry you claim to represent. I am specifically pointing to your article in MACazine Vol. 2 No. 11 page 38 in which you insinuated that you were privy to the release prices of the replacement software for 7/7 from Apple as well as the options that will be offered by Apple. Well, I have been in contact with Apple and the package you alluded to as well as the pricing had not been finalized at that point in time. The conversation I had with Lynn Hoppe of Apple was two weeks after I read your article!!

It may also interest you to know that Lynn Hoppe of Apple has helped me in another area that your readers have written to you about, but to my knowledge have not received any response: When running MacXL 3.0 in order to avoid the minor disk fix prompt which renames all files UNNAMED #1, etc., it is important to have the latest ROMs. Apple sent me the updated ROM chips needed, free, upon notifying them of my problem. THAT'S SUPPORT!!!!!!!

I wonder whether or not Apple received a bad reputation for products support because of their own failing or if it was created for them by contributing editors. If I am to subscribe to a magazine I EXPECT that it be accurate and accountable in its responsibilities to provide correct information, even at the expense of being the first to report the news. It's far more important to be right!!!

George V. Blevins, Jr.
St. Petersburg, FL

An answer from Orphan Support:

Dear George,

Thank you for your letter and your encouraging words about the support you have been getting from Lynn Hoppe of Apple. Few people have taken the trouble to contact Apple, but those who have are generally satisfied with the way Apple responds.

I have a couple of observations about your comments that I "insinuated" that I was "privy to the release prices of the replacement software for 7/7 as well as the options that will be offered by Apple." Certainly I have contacts which give me information that is not publicly available. I also am able to get early copies of the software in a prerelease form. There certainly is no guarantee that any of this information is "fin-

al," since it has not been made public. I try, as best I can, to sort out the good stuff from the questionable, and I made reference to the fact that a very early copy of the software had been changed considerably in comparison to what I described in the issue you read. I am not motivated by the need to be first with the information. When there is a two-month lead time for articles in a magazine, the weekly publications like InfoWorld make any such desires a little ridiculous.

Regarding the fact that Lynn said that pricing had not been finalized, that is quite consistent with what I have been told. After I (and many others) obtained a copy of the 0.99 release of the Migration Software in September, some of the people at Apple were still telling me that they had not yet decided how they were going to organize some of the software. My latest word is that the software is to be released within the next week or two. If this turns out to be true, it means that the software was essentially complete in late August. Except for the bug fixes and the last stages of testing, they need 2 to 3 months to get it all put together and out the door. If it turns out that the actual pricing or the options are grossly different from what I stated in my article, I will be the first to acknowledge my error and apologize for any problems it caused others.

I have heard that the software has been held up because of Excel. Microsoft was hard pressed to get Excel out on time and was not willing to risk that schedule in order to support the Lisa conversion tool (quite understandable). I would certainly have to believe that Apple did not want to release the screen conversion kit before the migration software. Once the screen conversion is installed, you are no longer able to do any conversions on that computer.

As far as the ROM version is concerned, the September MACazine (No. 9) contained the specifications of the recommended ROM for both the XL and the Lisa (H/88 and H/A8, respectively). However, the word I have from Apple is that none of the problems with MacWorks can be attributed to a ROM incompatibility. While I do not know if they have determined the source of all the problems, most of them have been with the MacWorks software itself. You were more fortunate than I in finding the up-to-date ROM, since I could get it only if I was willing to pay about \$60 (which I was not). I have an XL and a Lisa and have never had the disk problem you describe even with the very early version of MacWorks (I had a prerelease version in the fall of 1984).

I apologize for any inconvenience or disturbance which my column has caused you. I do not try to make it look as if I have "inside" information or "hot tips" and I feel badly that it came out that way. It is very common in the industry for those who write about computers to get things early, since there are publication deadlines that make it difficult to be timely with information (let alone early). I hope to do better in the future.

Regards,
David D. Redhead

MacBottom 20 Hard Disk Drive.

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Desk Accessories

The Foundation for a Powerful, Customized Macintosh Workstation

The principles of democracy dictate "one man, one vote." In a similar vein, the principles of computing on the Macintosh say "one computer, one task." Because the Macintosh was designed as a single-task computer, it almost seems seditious to expect it to do more than one thing at a time. However, the legendary slowness of the Macintosh can turn us all into revolutionaries. Oh, to be able to quickly switch from one task to another without the interminable delays of the Finder and the floppy disks.

Well, the designers of the Macintosh were revolutionaries in their own right and provided extra power in the form of the Apple menu. The Apple menu sits inconspicuously in the upper lefthand corner of the menu bar and holds the Macintosh desk accessories. Desk accessories are a hidden goldmine for Macintosh users. Let's see why.

When the Macintosh was first introduced, it came with seven built-in desk accessories. They were reasonably useful, although nothing to write home about. We all tried them out, but then we tended to forget about them. They were cute, and sometimes useful, but didn't add dramatically to productivity.

Desk Accessories Mushroom

It turns out that a quiet revolution has been brewing around desk accessories. Slowly and steadily, programmers have been turning out a multitude of useful accessories. There are now well over one hundred desk accessories for the Macintosh. What? Over one hundred? How is that nobody knows about them? One reason is that the developers of desk accessories are not the typical Macintosh developers. Desk accessories are relatively small, special-purpose applications. Their development doesn't require a team of 30 software engineers and a budget of \$30 million dollars. One programmer can create an accessory in a short time. As a result, a cottage industry has appeared, and desk accessories are springing up like mushrooms in a dark forest.

These new desk accessories range from the very simple to the quite complex. While some are sold as commercial products at commercial prices, many desk accessories are marketed under the share-

ware concept. They are distributed free through user groups or information utilities such as CompuServe. You can try them out without charge, and if you think they are worth using, you send the author a license fee. This fee is usually minimal, on the order of \$5 to \$20.

Getting your Shareware

The shareware approach has many benefits. First, you can try out software without investing any money up front. (If only this were the case with commercial software!) Second, the price is definitely right. Since shareware producers don't have to spend money on expensive packaging, advertising or distribution, they can charge very modest license fees. And third, shareware authors are very responsive. They actively solicit feedback from their users. If there is a feature that you would like to see in a desk accessory, you have a very good chance of seeing it appear on the Macintosh desktop after a chat with a shareware desk accessory developer.

This all sounds wonderful, but it's the *power* of desk accessories—not just their price—that can change your life. They are powerful because you can run them while you are running another application. To see what this means, consider a well-known macintosh task. When the Macintosh was first introduced, Apple went to considerable expense advertising that you could put a picture in a word processing document. Those of us who have tried to combine graphics and text have found that, while it is possible, sometimes it's just not worth the effort to do it. It takes about two minutes and forty-five seconds to go from a MacWrite document, return to the Finder, start up MacPaint, cut a picture to the clipboard, return to the Finder, start up MacWrite, and paste in your picture. And that is just for one picture! Many of us would be inclined to use this capability if it weren't so painful.

An Accessory to Ease the Pain

Enter Art Grabber, a MacPaint desk accessory written by the people who wrote VideoWorks. With Art Grabber, you never have to leave your MacWrite document. You select Art Grabber from the desk accessory menu (it's always there, remember), and a standard mini-finder box lists

all of your MacPaint documents. You open one, and a window displays the contents of the MacPaint document. You can scroll around the document. You can even make the window as large as the screen. When you select a portion of the picture in the same way as you do with the MacPaint selection rectangle, your selection is copied to the clipboard. You close the accessory and choose Paste. Voilà. Your picture appears in your MacWrite document (you never left MacWrite, remember?). Elapsed time: 15 seconds. You just saved two and a half minutes for each picture you want to paste. Suddenly illustrating a report becomes practical instead of a practical joke.

There are special desk accessories for a whole range of categories: text processing, graphics, communication, business, programming, file handling and some for just plain entertainment. (The Puzzle has been vastly improved upon.) Some are highly specialized accessories like HeapShow, which gives valuable information on the state of the Macintosh memory structure to programmers developing Macintosh applications. The HP12c is an accessory that provides a complete financial calculator, functionally equivalent to the Hewlett-Packard model.

Many more are general-purpose accessories. With Multi-Scrap, for example, you can have multiple scrapbooks on any disk, with any name. So you can keep individual projects on separate disks with their own dedicated scrapbooks instead of trying to cram everything into the system scrapbook. And Multi-Scrap lets you see the whole picture in the scrapbook.

Another useful accessory is ScreenSave, which automatically blanks out your screen after a preset time. No more worrying about burning in the screen when you go away for a while.

Some of the desk accessories are full fledged applications. The ClickOn Worksheet is an example. It is a full function spreadsheet and graph generator. There are sophisticated calendar accessories. And phone books. And data terminal emulators. And word counters. And macro builders. And spell checkers.

And you thought desk accessories were just cute little toys.



Creating a Seamless Environment

A seam appears in the Macintosh environment everytime you have to stop what you are doing to do something else. Desk accessories are functional mini-applications and utilities that bind these seams. Since desk accessories can be used at any time, you don't have to stop what you were doing to take advantage of their power. This lays the foundation for turning your Macintosh into a powerful, customized workstation.

Companies like Lotus have released "integrated" products that are somebody's vision of how they think you want to work. But integrated products aren't as necessary on the Macintosh as on the IBM PC. Since the Macintosh has a universal user interface, you interact with most programs in the same way. Consequently, it isn't as hard to learn how to use a spreadsheet and a word processor from different companies, as it is on the IBM PC. This leads to some intriguing possibilities. Why not design your own "integrated" workstation with the programs that you want and like.

Still, the Macintosh is slow. Desk accessories, as we've seen, can help dramatically. But if you want to go one step further, try using the performance accelerators.

An Accelerating Experience

Three types of performance accelerators are available. The most famous is Apple's Application Switcher. This ingenious piece of software divides a 512K Macintosh into smaller pieces. Each piece can run a separate program. You can switch between and copy information from one program to another instantly. The Switcher does have some problems, however. Since it is not compatible with many programs, it may provide you with some spectacular crashes. It also changes the way you interact with the Macintosh. The model of double-clicking an application from the desktop doesn't hold with the Switcher. But with stable, compatible applications, like MacWrite, MacPaint and MacDraw, the Switcher is a dramatic productivity tool.

A second type of accelerator is the disk cache, such as TurboCharger or MacBooster. These are software tools that set aside a portion of RAM as a storage area for frequently used programs and data. They have sophisticated algorithms for keeping the most frequently used programs in RAM. These programs run at RAM speed instead of at floppy disk speed. To return to the Finder from MacWrite takes 4 seconds instead of 40. They speed up any application that needs to access the disk.

Finally, there are the RAM disks. These programs use a portion of RAM to emulate a floppy disk. They are not as useful as disk caches because information stored on the RAM disk can be lost if the system crashes, while disk caches always update the floppy disks. Also, most RAM disks

are too small to hold many useful programs.

However, some of the new RAM disks that are available with extended memory boards overcome these problems.

MacMemory, for example, makes a 1.5 megabyte upgrade board that comes with a RAM disk. It gives you a 512K Macintosh with a one-megabyte RAM disk. A one-megabyte RAM disk is quite sufficient to hold many useful programs: you can keep the System, the Finder, MacWrite, MacPaint, MacDraw, Microsoft File, a phonebook, notepad, and several utility programs on it and still have nearly 200K of free space to play with. And if you crash or reset the Macintosh, this RAM disk doesn't destroy your information. (You do lose everything if the Macintosh loses power, however, so some caution still needs to be taken.) Moving from MacWrite to MacPaint takes 7 seconds. Your need for an "integrated" program diminishes when you can configure your own personal work environment and switch between applications in seconds.

A Star is Born

When the power of the newly available desk accessories is combined with the speed of the performance accelerators, a powerful new configuration of the Macintosh is born. The exciting thing about this new configuration is that it doesn't have to be designed by an engineer at Apple or a team of programmers at Lotus Corporation. Each of us can design our computer environments to suit our individual needs. Now that's a computer for the rest of us!

Accessories and accelerators mentioned in the article:

Art Grabber
Hayden Software Company
600 Suffolk St.
Lowell, MA 01854
617-937-0200

HeapShow
B/T Computing
P.O. Box 1465
Euless, TX 76039

HP12c
Dreams of the Phoenix
P.O. Box 10273
Jacksonville, FL 32247
904-396-6952

Multi-Scrap
Bob Luce
324 East Shaw
Fresno, CA 93710

ScreenSave
John R. Dance
471 East 500 North #1
Provo, Utah 84601

ClickOn Worksheet
T/Maker Graphics
2115 Landings Dr.
Mountain View, CA 94943
415-962-0195

Applications Switcher
Apple Computer
20525 Mariani Ave.
Cupertino, CA 95014
408-996-1010

TurboCharger
Nevins MicroSystems, Inc.
210 Fifth Ave.
New York, NY 10010
212-563-1910

MacBooster
Mainstay, Inc.
28611B Canwood St.
Agoura Hills, CA 91301
818-991-6540

MacMemory, Inc.
473 Macara Ave. Suite 701
Sunnyvale, CA 94086
408-773-9922

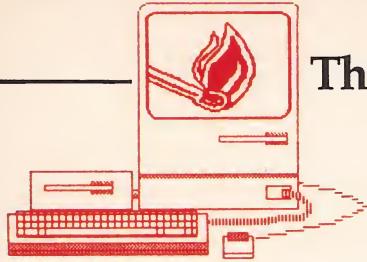
—Howard Bornstein

Howard Bornstein is a product design consultant in Woodside, California. He is currently writing a book on Macintosh desk accessories for InfoBooks, Inc.

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The Active Window

Word processing is the number one use for microcomputers. Yet, this is still the weakest area of Mac software. I've mentioned before that I continue to use MacWrite, even though Microsoft Word is more sophisticated. I've been using MacWrite 4.5 and I'm not too thrilled with it.

For some reason it likes to give spurious messages about not enough memory and disk full problems. I started using it because I somehow got the mistaken idea in my head that to print on a LaserWriter, I had to be using 4.5. So, I started converting my old files to its new format.

When I finally had to work on a large document (30 pages) that someone else had created, I was appalled at the results. I was working under Switcher with 200K allocated to MacWrite 4.5. As I started to make changes and add lines, I found that MacWrite could not keep up with me. Every two lines or so there would be a 4-5 second pause while it went to disk.

And I was working on a Mac XL with a hard disk! So I figured, all right, here it is finally, the situation that is going to get me to convert to Microsoft Word. I had been resisting a change to Word primarily because you have to go through too many steps to change fonts, something that I do a lot. Also, I kept hearing about niggling problems with it printing on the LaserWriter. I have to take my files to the local AlphaGraphics franchise occasionally for printing on the LaserWriter.

So I started up Word, gave it 300K of memory in Switcher (I always work with Switcher since I have 2 megabytes of RAM) and tried to load my MacWrite 4.5 file. After about 10 minutes of staring at the Wristwatch I got a message that said there wasn't enough disk space to convert it. So what should I expect, I only had about 2.5 megabytes free on the hard disk???

So I restarted, ran Word without Switcher and did it again. No cigar. Same results. With 2 megabytes of RAM and 2.5 megabytes of disk space I couldn't get at my file. It was a weekend, of course, so I couldn't call Microsoft. Double-checking, I found that the file did seem to have been loaded into memory, despite the message saying it couldn't be done. So I tried to

save it. The system went off into never-never land and I had to restart it.

So, back to 4.5, but this time not using Switcher too. It seemed to go to disk less, but each time it did I would get the stupid message that "An I/O error occurred, caused by disk full or bad media. Some data may be lost." Fortunately I had already heard that these messages were mostly bogus, so I didn't panic. I just clicked OK and the program continued on its merry way.

Two things occurred to me immediately. First, someone should tell the programmers that the term I/O error is jargon that everyday users don't know (it means "input/output" error, the input/output device being the disk drive), and second, why doesn't the program load the entire file into memory when I have 2 megabytes? At least I wasn't getting the more common message from MacWrite 4.5 about being out of memory (another one you just have to ignore).

Then, when I tried to save, the program said I couldn't use that name and gave me the dialog box you see when you do a Save As. I proceeded to use the name anyway by simply clicking the Save box. Wrong move. Bye-bye to never-never land again. I wanted to be sure I wasn't experiencing compatibility problems with my Mac XL, so I moved into the other office and started working on our Monster Mac (it has the 2 megabyte memory upgrade from Levco).

I created a RAMDisk of about 1.4 megabytes so that I could load up a huge System file and several applications. Since we don't have a hard disk on this system, I didn't want to use Switcher. I had to bang out a few letters, so I got started on the first one. Every time I would try to simply scroll from the beginning to the end, I would get the "not enough memory" message. This was a really gigantic two page letter, folks. And clicking the OK button once was not enough. The message kept reappearing. I hadn't saved the file and didn't want to retype it, so I would keep clicking the OK button until the message finally went away. The average number of times required to click it was about four. Once it took 10 times to get the stupid message to go away.

I finally got done, but boy was I fed up. I never experienced this kind of garbage before and I've been using computers for word processing since 1979. I started out with an Apple II Plus with a Z-80 card in it so that I could run WordStar under the CP/M operating system. The name WordStar is enough to make some die-hard Mac users gag, but I'll tell you, it never let me down.

Later, I moved on to an Altos 5-15D, a multi-user system. Each disk held 700K, and three people could work on the computer at once. Mostly I just used it by myself but occasionally I conducted training seminars with three people using it. I bought the central unit for \$2,000 in a fire sale. Decent terminals (screen and keyboard) ran about \$500 each.

The thing that I liked most was the fact that I could choose any keyboard I wanted. I tried a bunch and then bought the one that felt best (an ADDS Viewpoint). By then I was a whiz with WordStar, and with a keyboard that was just right for me, I could cruise along at 70-80 words per minute.

Combined with the MailMerge add-on, I never ran into anything that I could not do with WordStar. And I did a lot; 100 page academic papers, a 400 page manuscript for a book (which fit on one disk), seminar outlines, etc. I even created some complicated files for a client that took user input and printed out billing coupons.

Now I want to do all my word processing on the Mac. I was fine using MacWrite (any version) for my little one-page letters. It always bugged me that I couldn't move the left margin over to where it should be, but that was a minor nuisance. Word is the full-blown word processing program for the Mac, but there are some things I just don't like about it.

So how come there aren't a dozen word processing programs for the Mac, like there are data bases? The answer is simple: MacWrite is free. Too many of us can get by with MacWrite. Software publishers see this and are unwilling to put the money it would take into developing high-end word processing programs.

A long time ago Palantir Software was listed by Apple's Developer Relations as having a word processing program in development. They've apparently put it on indefinite hold. Rio Grande Software had advertised RGS Wright but then abandoned the project. Last August I got a preview of a British program called MacAuthor which was very impressive, particularly for academic work. They haven't rushed to release it and just keep enhancing it.

This situation is not good for the Macintosh computer in the marketplace and hence not good for all of us owners. When

business buyers look at computers and say, "Well, how many word processing programs are there to choose from?" and get an answer like 20 or 30 for the IBM PC, 12 or 15 for CP/M computers and two for the Mac, they get a certain impression of the machine.

Many IBM people have always sneered at the Mac as a toy (mainly through ignorance of its real capabilities). The Mac needs more word processing programs to appear more of a legitimate contender. Guy Kawasaki of Apple is painfully aware of this and has been battling to get MacWrite and MacPaint "unbundled." Apparently the debate has been raging on this point for some time.

Those who favor the status quo undoubtedly see the two free programs as a strong sales vehicle, making the Mac look more attractive to a potential buyer. I must admit that it is not obvious to me which approach is better for the Mac in the long run. It will be interesting to see how this gets resolved and what happens in the area of word processing development. All I know is that I want better word processors for the Mac. I am not satisfied with the current situation.

Other Casualties

Word processing programs aren't the only ones not seeing the light of day. Microsoft made a big splash at the August Macworld Expo in Boston with their announcement of a pagemaking program called Typographer. Showgoers were saying it showed promise and that they liked the \$195 price tag. In November Microsoft announced that they had dropped their plans to publish it. A spokesperson said it was because Typographer failed to meet Microsoft's standards for quality and performance. This whole episode is very curious.

It doesn't surprise me that a publisher would fail to put out a product that is deemed inferior. But isn't that supposed to be determined before the program gets accepted and is announced as part of the company's line of products? Microsoft also did away with their Mac Library division, which had been established to publish third party software.

The developers, Broca Software, claim that their Typographer got caught in this overall shutdown because they missed their due date. And listen to this quote from Doug Rupe of Broca that appeared in InfoWorld for some heavy duty bravado, "The cancellation of the product gives us an opportunity to add features to the program that were taken out by Microsoft. This is not a setback." Right, Doug. Microsoft dropping your program is not a setback.

But the question still remains, why did Microsoft drop it? I find it hard to believe that all of a sudden they said, "Oh my

gosh, it has bugs, time to kill the project." More likely it was the result of a reassessment of where they are going with products for the Mac. And, maybe it's related to the fact that many large companies have been backing off or getting entirely out of the Mac software business. Obviously Microsoft is going to continue publishing Mac software, but maybe just more selectively.

While we're talking about Microsoft, whatever happened to their contest for the best program written in Microsoft Basic? I know a lot of programs were submitted and at least some of them were pretty good stuff. I've spoken with two programmers who entered and both told the same story. They'd gotten nothing but a big run around about the whole thing. Hey Microsoft, what gives?

The State of Vaporware

I've noticed an interesting thing lately. We're seeing much less "vaporware." For those unfamiliar with the term, it is normally used to describe products that have been announced, bally-hooed, advertised, etc. but which have yet to appear. When the Mac first came out, we were plagued with vaporware.

A product would be announced, we would get excited and then the waiting would begin. Months would pass and finally it would appear, usually well after we had given up caring. We kept hearing about how it took longer to write a Mac program than anticipated.

I don't think the change is due to programmers now being more aware of how long it will take to do something. They still grossly underestimate. That's just a natural thing in software development and is certainly not unique to Macintosh programming.

Rather, I think it is due to publishers noticing that the adverse effects seem to outweigh any marketing benefits. Lotus took a lot of flack when they didn't make their original ship date for Jazz. By the time Jazz did finally appear, many people (myself included) had simply lost interest.

Although there may be less vaporware, there are still a few notable exceptions. Wizardry has been advertised for some time, but I haven't seen it yet. It will probably be out by the time this gets to you, but I'm beginning to lose interest again. InMotion, an animation package, was shown at the Boston Expo in August and advertised at the same time. The latest word on its availability, "first quarter, 1986."

What's Hot and What's Not

HOT: The ImageWriter II. This printer is clearly superior to the original ImageWriter (now discontinued) and it costs the same. It is faster in Draft and Standard modes (twice as fast Draft and 30% faster Standard) and goes at about the same speed in

High quality mode while producing significantly better looking output.

I had an opportunity to hear Curtis Sasaki, who managed the development, describe it right after it was released and he was extremely proud of it. Later I discovered why. While I was printing labels, a piece that was sticking out shredded off and got stuck inside. It was so simple to remove the two front screws and clean it out that even I could do it (my wife is laughing in the background—she doesn't believe I could do it, but I did). Good job, Curtis!

NOT: What's happening to the term "hacker." Programmers talk about "hacking" out a program and from this the term came to mean someone who loved to just mess around with programming. Now the press uses it to describe mentally warped people who try to illegally access remote computers using modems. These sickos get their jollies breaching the security. Usually this is enough to appease them, but sometimes they also destroy data.

Because of computer-illiterate newspaper reporters, we can no longer use the term "hacker" to affectionately refer to our local guru who saves our data for us every time we manage to mess up a disk. Thanks turkeys.

HOT: Dungeon of Doom. This is a full-blown adventure game that is in the public domain. It amazes me some times how good some of the free software is. It can be downloaded from CompuServe and is probably available through most User Groups by now.

NOT: Mail order firms that you can't get through to, even on their toll number! I'll stick to MacConnection, thank you.

HOT: The support for Filevision and Business Filevision from the Telos folks. Any programs that are as sophisticated as these require good support from the publisher. Telos provides just that. You can get them on the phone. They have a newsletter. But most of all, they have integrity. I recently saw a mailer from them to registered owners that documented two "post-release problems" as they called them. They described them in detail and they provided ways to avoid them and to fix them as much as possible.

You might be thinking, "how come this is a HOT item when it is about two bugs in the program?" Well, no matter how thoroughly any program is tested, some bugs will crop up after release. This is just an unavoidable fact of life. We can, of course, reasonably expect that they be obscure and not create havoc. This is the case with Filevision. The important thing is that the company is being honest and forthright with its customers.

It's not easy to send out a memo documenting two bugs. It's easy to try to cover them up and deny any problems exist, like some companies do. My hat is off to the folks at Telos.

NOT: Font management in MacDraw and MacDraft. If you don't have a hard disk, you may not have noticed the problem. It's such a gross mistake, though, that I can't believe it got through testing. In these programs, there is one menu that contains the fonts AND the sizes. The sizes are placed at the bottom, after all the fonts.

Those who work with hard disks can afford the luxury of a huge System file with lots of fonts in it. On my Mac XL, I'm loaded to the gills with fonts. When I use MacWrite or MacPaint, the Font menu

goes almost to the bottom of the screen. Guess what happens when I pull down the Font menu in MacDraw or MacDraft?

The fonts are there. But after the first two sizes, the rest of them are off the screen. I can't get at them. So much for 24 point titles. Next time, I hope they test their software with hard disks and font-crazy people like me.

—Charlie Jackson

Charlie Jackson is a Contributing Editor. He works for Silicon Beach Software. Send your comments via MACazine or CompuServe 73026,3325.

Tired of Trolls? Weary of Wizards?

Real Life

The Greatest Adventure of All

The screenshot shows the "Real Life" game interface. At the top, there's a menu bar with an Apple icon, followed by "Go", "Take", "Drop", "Examine", "Act", "Listen", "Read", "Think", and "Misc". Below the menu is a list of movement commands: North, South, East, West, Left, Right, Forward, Back, Up, Down, Across. A cursor arrow points to the "Back" command. The main area displays a city map with buildings and streets. A speech bubble labeled "EASY TO PLAY" says: "You are in the middle of a very busy street corner. Up and down the street are various buildings. Directly across the street, eastward, is an ally. The way out - behind you - is called Death." Another speech bubble labeled "COMPLETE" says: "Maps are included, and clues are as close as the keyboard." A third speech bubble labeled "MEANINGFUL" says: "Real-life situations, real-life decisions - real-life consequences." At the bottom, a text box reads: "Real Life is not just another fantasy, not just another game. It is that most fantastic of all games, the game of life. Real Life. It is an opportunity to find out what awaits you at the end of your life."

An interactive novel from Relational Systems Corporation.
For the 512k Macintosh. Also available for Apple //c and 80-column //e.
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To order, call (313) 645-5090. Or write us at: 22809 Shagbark, Birmingham, Michigan 48010

Due to the delicate nature of some Real Life issues, this product is not recommended for children under 13.

Circle 83 on Reader Service Information card

HIPPO COMPUTER ALMANAC

In the mad rush to convince the world that the Macintosh is a reputable business computer, software manufacturers and users alike seem to be neglecting the "just-for-fun" aspects of the machine. Happily, this isn't the case with Hippopotamus Software, Inc. The newest product in their line—the Hippo Computer Almanac—is impressive, practical, and, yes . . . fun! By entering questions in plain English, such as "Who won the Super Bowl in 1975?", the Almanac promptly displays the correct answer. (Refer to the figure for a few examples.)

There is no manual to speak of—just a page of notes on the inside of the program package. On-line help, however, describes the types of information available and provides examples of the proper phrasing of questions.

The sheer volume of questions that the Almanac can respond to is staggering. There are eight major categories of data, each with several subsections, including: Geographical Information

- the distance between any two places.
- latitudes and longitudes for cities or countries.
- lists of cities in states and countries.
- populations or areas—in square miles—of cities, states, or countries.
- area codes for cities, states, or countries.
- monetary units for countries and what they are worth in U.S. dollars.
- capitals of states or countries.
- postal abbreviations for states.
- zip codes of major U.S. cities.

Historical Information

- U.S. Presidents and Vice Presidents.
- important dates in history.

Unit Conversions

- time, mass, distance, volume, charge, energy, etc., conversions.

Sports

- the winner, loser, and game count for each World Series.
- the winner, loser, and score of the Super Bowl, or NFL and AFL playoffs.
- the winner and loser of the NBA playoffs and conference championships.
- the gold medal winners for Olympic events and the location of each Olympiad.

Language

- the ability to translate a set of common words (e.g., numbers, days of the

- week, "hello," "please") into 33 languages.
- corrects the spelling of commonly misspelled words.

Science

- geometric and mathematical formulas.
- size, gravity, length of day and year, distance, and density of the planets in our solar system.

Awards and Prizes

- winners of Academy Awards.
- Nobel Prize winners.

Miscellaneous

- toll-free telephone numbers.
- caloric content of food.
- loan calculations.
- time and date calculations.
- the time in various places in the world.

It's amazing that so much information can be packed onto a single floppy!

Almanac works well. If it doesn't understand a question, often a slight rephrasing will do the trick. So far, the only thing that I've been able to stump it on (within the limits of included topics) is that it's always one month ahead when I ask it the "date." I haven't checked with Hippopotamus yet, but I suspect the problem is that I am using a Mac XL rather than a standard Macintosh.

The screenshot shows a window titled "Hippo Computer Almanac" with the copyright notice "© 1985 Hippopotamus Software, Inc." Inside, there are several sections of text:

- "» How far is it to Kabul? Kabul, Afghanistan is 6576 miles from Framingham, Massachusetts."
- "» How many cups in 2.25 gallons? 2.25 gallons is equal to 36 cups."
- "» What happened on Oct. 20th?
On Oct 20 in...
1859: John Dewey, philosopher, born.
1890: Sir Richard Burton, traveller and writer, died."
- "» —"

Some other special features include the ability to switch between screen and printer output, and "expandability"; i.e., you can add, update, or delete topics in the Almanac. After typing: *Remember Steve's birthday May 21*, any time you later enter "Steve" or "Steve's birthday," the Almanac will display: *Steve's birthday May 21*.

In summary, even if the included information had no utility whatsoever, I'd recommend buying the Almanac for its

novelty value alone. After all, how many programs do you currently own that evoke exclamations like: "Wow! You mean it can really do that!"

The Hippo Computer Almanac is a product of Hippopotamus Software, Inc., 985 University Avenue, Suite 12, Los Gatos, CA 95030; phone (408) 395-3190. It can be used on any Macintosh or Macintosh XL.

—Steven Schwartz

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Desk Accessories in Review

If you've had your Mac for over a week, you undoubtedly know a bit about desk accessories; i.e., the control panel, note pad, scrapbook, and other mini-programs that you can run while working with another program. You may not know, however, that you are free to add new desk accessories as suitable ones come along. Several software publishers have recently released their own desk accessory packages. In this article we'll examine three such packages that can be used with or in place of the standard desk accessories: Sidekick from Borland International, BatteryPak from Batteries Included, and FileFinder from Nashoba Systems.

There is apparently some agreement among software manufacturers concerning which functions make the best desk accessories. The accompanying chart shows the overlap among the three products, as well as where they differ. First we'll examine features that are common to two or more of the programs; next, the unique features; and finally, I'll summarize the findings.

Calendar Common Features

A decent calendar is sorely needed in the standard Mac desk accessory list. Why bother with the paper variety at all when it's just as easy to pull down the Apple menu and scan or update your appointments? The Sidekick and BatteryPak calendars share a number of common features. Each lets you quickly jump a month or year ahead (or back), and shows which days in the selected month contain notes. Although both allow you to search for key phrases, Borland—for some strange reason—decided to limit Sidekick's search function so that it could only be used to search the *currently selected day's appointments*. Forgot what day you're supposed to be at the dentist? Lots of luck finding it. BatteryPak's search option examines all entries in the calendar for the specified string. Partial search strings are acceptable (e.g., "par" for parents, parakeet, etc.), but all searches are case-sensitive; that is, "Parents" and "parents" are not the same. A "find another" option is also included to see other search matches. Unlike Sidekick, only the first match in a particular day will be highlighted, regardless of how many

actual matches occur in the day.

BatteryPak is designed to show you a single day's notes (12 lines maximum) at a time. Sidekick expands on this by offering two different views: a day at a glance and a week at a glance. A scroll bar is available at the side of each day's notes to allow additional notes beyond those that can be immediately seen. With Sidekick's print option, the notes for any day or week can also be printed. (Sidekick's Print Manager utility—discussed later in this article—can also be used to print a year at a glance.)

Calculator

BatteryPak offers two calculators in its desk accessory list. Although each is based on Reverse Polish Notation (RPN), one is packed with scientific functions (the scientific calculator), while the other (the RPN calculator) contains fewer functions and is designed for 128K Macs. How does an RPN calculator differ from a standard business calculator? To multiply 3 times 4 and subtract 2 on a business calculator, you press: $3 * 4 - 2 =$. On an RPN calculator, you press: 3 ENTER 4 * 2 -. Although essentially the same keys are used to perform the sample calculation, the order of entry is different. On a business calculator,

the operation (multiplication, subtraction, etc.) is entered between the two numbers—as in $4 * 7$. On an RPN calculator, the two numbers are entered first and then followed by the operation—as in 4 ENTER 7.

BatteryPak's calculators include the ability to fix the number of decimal places of accuracy (from 0 to 9), scientific notation, constants, squares, square roots, reciprocals, factorials, percentages, log and anti-log functions, powers, elementary statistics (summation, standard deviation), trig functions, and polar/rectangular conversions. Engineering heaven? The manual includes a keystroke by keystroke guide to using the functions.

Sidekick's calculator (Figure 1) offers some of the same options as the BatteryPak calculators: trig functions, logs, powers, and square roots. There are also four built-in financial functions for calculating the future and present value of an investment, annuities, and the level payment necessary to pay off a loan. The calculator simulates a paper tape (just like the good old adding machines that our grandfathers used to crank) that can be cut and pasted into other documents or be printed directly from the screen.

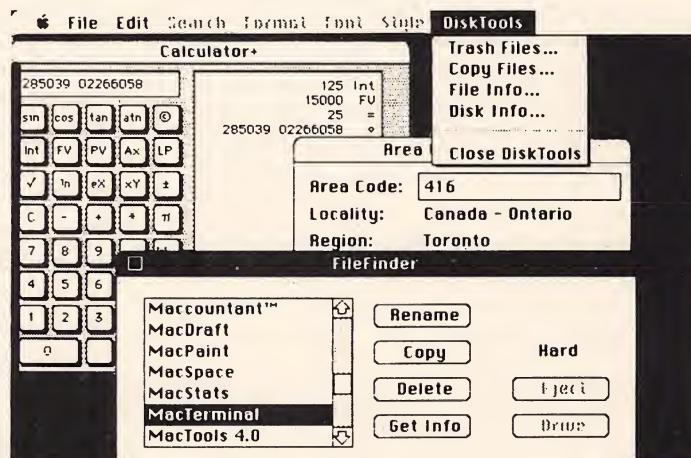


Figure 1. A multitude of desk accessories. Clockwise from the top left are: Calculator+ (Sidekick), DiskTools (BatteryPak), Area Code Lookup (Sidekick), and the FileFinder menu.

Which is more useful? I think it's a toss up. The BatteryPak calculators are essentially all scientific/engineering; Sidekick combines a few scientific with a few business functions. My needs are such that I can easily do without trig or log functions, and would prefer a few more business and statistical functions than either package offers. Each, however, is definitely a step up from the "plain vanilla" calculator included in the standard Mac desk accessories.

Disk Tools

FileFinder and BatteryPak both offer a desk accessory that allows you to duplicate several Finder functions—deleting files, copying files, and presenting file and disk information—all without leaving the current program. Although this is just one of the accessories included in BatteryPak, it's the only function provided by FileFinder.

With BatteryPak, selecting Disk Tools from the accessory menu causes a new pull-down menu item (DiskTools) to be added to the current program's menu bar (see Figure 1). The menu option remains until you specifically choose "Close DiskTools." Functions include "trashing files" (that is, deleting a file followed by emptying the trash can), copying files, and providing file and disk info. The "info" options give the same information generally available from the Finder (including locking and unlocking the selected file), but without the "Comments" box.

When activated, FileFinder (Figure 1) presents a small window dedicated to its four functions: deleting, copying, and renaming files, and displaying file info. Unlike BatteryPak, the FileFinder window can be moved about on screen, as well as shuffled behind the current application being worked on. Thus, once loaded from the accessory menu, it too is always accessible.

One major difference between the two accessories is the speed with which they can be invoked. Selecting DiskTools from the d.a. menu results in almost instantaneous installation of the tools on the menu bar. FileFinder, when tested on the same computer, took 30 seconds before its window appeared on screen. When producing a copy of the same 5,776 byte file, each program took approximately 13 seconds. Time to "trash" that same file was only 3.3 seconds for FileFinder, but almost twice as long—6.2 seconds—for BatteryPak.

The file "rename" function is unique to FileFinder. Although you can obtain the same effect with BatteryPak, you would have to copy the file to another name and then trash the original file—two steps rather than one.

Phone Dialer

BatteryPak's Phone Pad. In conjunction with any Hayes-compatible modem, the

Phone Pad accessory allows you to autodial any number. That's right—other than a modem and a telephone, no special equipment is required. The Phone Pad is a 250 page free-form notepad (Figure 2). BatteryPak's manual gives some suggestions that work well for setting up your directory. For instance, page 1 might be reserved for a table of contents, pages 2—49 for notes taken during calls, and the remaining pages for your directory. Since there is no sort function, alphabetizing the entries is up to you.

The phone pad's "Find" feature allows you to quickly search the contents of the pad for any text string. Note, however, that searches are case sensitive (i.e., "SCHWARTZ" and "Schwartz" are not the same string) and that each search begins at the current cursor position and extends only to the end of the file. Thus, if you are in the "D" listings, you won't find a name that begins with B. It's a good idea, therefore, to use the "Go To Page" function to jump to page 1 before starting a search.

Although the Phone Pad doesn't come with a lot of features, it's simple to use and works well. Just find and highlight a telephone number (as in the illustration), press Command-D (for "Dial Number") and your number is dialed. Be careful to

keep a backup copy of the Phone Pad file, however. While writing this article, I managed to trash the file by closing the current application (MacWrite) without closing the Phone Pad first.

Sidekick's Phone Accessories: Area Code Lookup. If your job—like mine—requires a lot of telephone work, you may occasionally return from lunch to find a stack of messages waiting for you. How about guessing where area code 215 is? After all, you don't want to return the call when the other party is at lunch. With Sidekick's area code lookup feature (shown in Figure 1), you simply type a three-digit area code and—as the last digit is entered—the state, city, and time zone are instantly displayed (refer to Figure 1 for an example).

Sidekick's Phone Accessories: Phone Book. For frequently called numbers, Sidekick allows you to create a special entry containing the person's name, company, address, phone number, classification (i.e., friend, business associate, etc.), and special comments. Each such entry can later be selected from a pull-down phone directory—if you elect to add it to the menu—or chosen from the scroll box at the right of the phone accessory display (shown in Figure 3). Phone book entries can be sorted by name or classification, and multi-

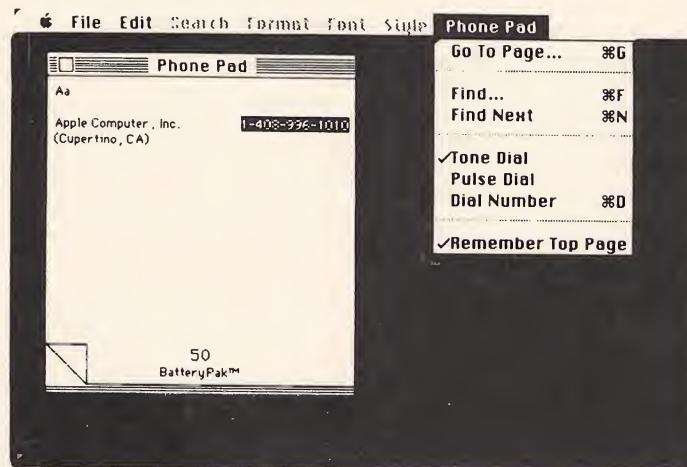


Figure 2. *BatteryPak's Phone Pad.* Just click on any number in the Phone Pad, press Command-D, and—if you have a Hayes-compatible modem—the number will automatically be dialed for you.

ple phone books are supported. By the way, if you already have a phone book created in either MacPhone, HabaDex, or set up as a standard text file, Borland includes a utility program that painlessly converts those files for use with its phone accessory. And it works!

Sidekick's Phone Accessories: Phone Log. Each call that you place or receive can be recorded in an on-going phone log file and later be edited and/or printed. Each entry contains the number dialed, the name of the person called, start and stop times, the duration of the call, date, phone charges (if you previously entered the per minute charge for a call to that number), and consulting fees to be charged based on the connect time for the call. Any notes that you made during the call can also be added to the log. You can also sort the log entries alphabetically according the person called, rather than displaying it only in the natural chronological order. What more could you ask for?

Sidekick's Phone Accessories: Auto-dial. Borland manufactures a special hardware device called "PhoneLink" (\$45) that connects to the Mac's sound port and your telephone, and allows you to use the application's auto-dial function. A modem is not required. Numbers can be selected for dialing from the phone directory pull-down menu, from the list in the side scroll box, or by pressing the appropriate number keys on the dialing display. As of press time, Borland has answered the criticisms about this extra cost by providing an alternative of autodialing through your modem instead.

Previsions are also made for specifying an alternate long distance or credit card service and adjusting the dialing speed of all calls. Although Sidekick's phone accessories are more extensive and impressive than BatteryPak's Phone Pad, there are a few minor shortcomings that you should be aware of. These include: (1) the autodial feature cannot be used with a Mac XL; since there is no sound port, sending the tone signals locks up the system; (2) the downward scroll arrow does not function when examining the phone log (the down "box," however, does work); (3) sorting in the phone directory is limited to "name" or "classification" only—there's no option to sort by company.

Print Spooler

BatteryPak and Sidekick both include a "print spooler"—a d.a. that allows you to print a file without interrupting the program in progress. Each is limited to working with files saved as "text only"—one font and no special print attributes. Each allows you to specify the number of spaces that tabs are to be converted to and to select a type size for the document (Sidekick offers three choices of characters per inch, two of lines per inch, and two sizes

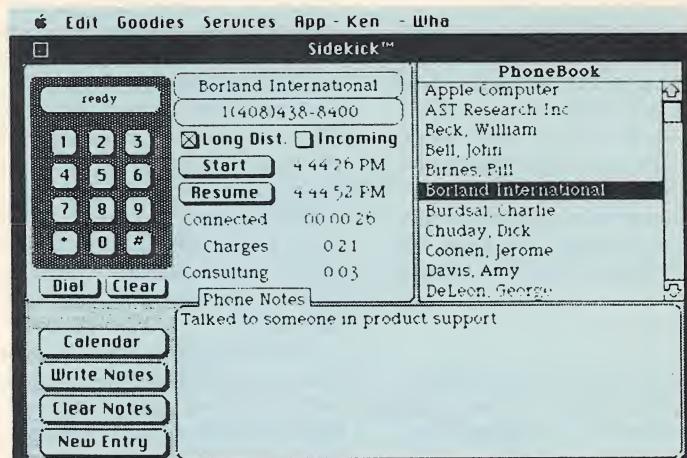


Figure 3. Sidekick's phone accessories. For world-class telephone jockeys, Sidekick offers every imaginable phone function. Although it won't do the talking for you, it seems to do just about everything else.

of paper; BatteryPak limits the selection to normal or compressed print). You can also choose left and right margins with Sidekick. BatteryPak also allows you to add page headers which include the name of the file being printed, the date, time, and page number. In combination with an option for line numbering, the BatteryPak d.a. does a great job of printing easy to read program listings.

Sidekick includes more formatting options. BatteryPak offers few such options, but adds several other nice touches. Both programs do the trick. Keep in mind that the restriction of "text only" files means that the spooler is good only for drafts of documents and program listings—files for internal use only, for the most part.

Unique Features: BatteryPak Launcher

Once selected, the Launcher replaces the Finder for all program and document loading operations. When you quit from a program, the Launcher's dialog box appears rather than the Finder. To run another program, all you have to do is click on the program name. You can attach a document to the selected program just as easily. (The document will automatically be loaded immediately after the program appears on screen.) Another option lets you select a document to be printed from within an application. Unlike the Minifinder, no pre-configuration is needed to run the Launcher. All programs are always available.

To test the difference in speed, I recorded the time required to quit from MacWrite and load Crunch with the Finder,

Apple's Minifinder, and the Launcher. Times required (in seconds) were: Finder = 53.8; Minifinder = 31.9; and Launcher = 33.8. For all practical purposes, the Minifinder and Launcher were the same (a savings in time of approximately 40% over the Finder). When launching a non-installed application with the Minifinder (which requires that you go to a secondary menu and dialog box), the Launcher has a slight advantage.

The Launcher also has a "Goodnight" option designed to duplicate the Finder's "Shut Down" option. Note that on a Mac XL with MacWorks 3.0, this results in a warm reboot rather than shutting down the system.

Unique Features: Sidekick Clock

Although the Mac comes with a clock accessory, Sidekick's clock may be preferred by some. It's an analog clock (with hour, minute, and second hands) rather than the usual digital one. In short, the clock accessory gives you a high-tech version of a low-tech item.

Note Pad +

Take the standard Macintosh Note Pad desk accessory, add some new features such as a search option, standard document width (in contrast to the regular note pad's 32-character limit for line length), and the ability to load, save, and merge copy from any "text-only" file, and you have Note Pad +. In fairness, BatteryPak's phone pad serves a similar function, although its page width is very limited and is better suited for jotting brief notes than for drafting documents.

"POWER OF THE PRESS"

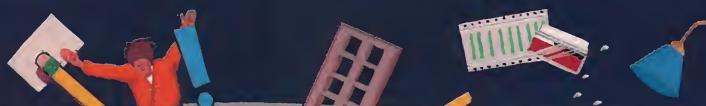
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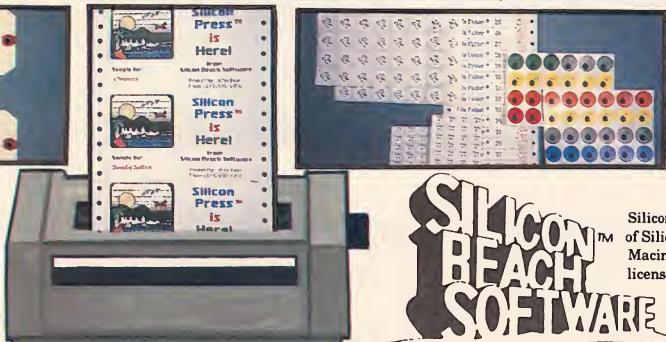
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Telecommunications

Wouldn't it be nice to be able to run a telecommunications program while simultaneously working with another application? Popping back and forth between a bulletin board system (BBS) and a MacWrite document? Yes, it would be nice, and Sidekick's MacTerm lets this happen—after a fashion. To test it, I logged onto the Boston Computer Society's bulletin board while working on this article. Next, I turned on the "record" function of MacTerm (to save incoming text to a disk file) and asked the BBS to list the currently logged users. I then switched back to this document and let the user list scroll on in the background. Although I was able to continue typing, the Mac paused for about 2 seconds before each character was displayed. Since the record function spends a lot of time accessing the disk, I also tried the same thing with the record function turned off. In both cases it was slow death trying to do anything in MacWrite.

MacTerm works with any Hayes-compatible modem. Duplex (full or half), baud rate (300, 1200, or 2400), and data recording or "playback" (sending) are all easily selectable from a standard menu. There is also a menu for storing up to seven bulletin board or on-line database system phone numbers. Although the "concurrent" operation (discussed above) isn't much to cheer about, the d.a. is a snap to use and offers sufficient functions to take the place of a full-featured telecommunications program for many users.

Special-purpose Lists

Called "QuikSheets," SickKick includes four types of pre-formatted lists: alarms (discussed below), credit cards (card numbers, phone numbers to call in case of theft, and credit limit), things to do (including a check box to indicate each completed task), and an expense record. If you're not satisfied with these choices, you can create up to 20 of your own special purpose lists using the "QuikEditor." Each list can contain a maximum of seven columns, and columns can be reserved for either text or numeric data. Column totals are automatically included for each column declared as numeric.

Alarm

Sidekick's alarm feature goes well beyond the Mac's built-in alarm d.a. The user can set up to 15 separate alarms—to any minute, hour, day, and year. When an alarm goes off (a single beep), the apple icon in the main menu line flashes. The next time you select QuikSheets, you are notified that an alarm has sounded, shown any message that was attached to the alarm, and given an option to remove the alarm or reschedule it for a future time.

Print Manager

The Print Manager (Figure 4) is an impressive utility for sending Sidekick's QuikSheets, calendar, and phone book to screen or printer. A variety of formats are provided and include reports, mailing labels, index cards, and sheets designed to fit into a small notebook.

D.A. or Stand-alone Application

Sidekick offers a choice. You can either select the accessories that are most useful to you and install them in the d.a. menu, or you can run the majority as stand-alone programs. Thus, even if you don't need an accessory often enough to justify adding it to the d.a. menu, you can use it on the rare occasions that it's needed without having to install it first. BatteryPak, by the way, offers a similar option called "Try Accessory" that lets you use any accessory without installing it.

So Which Do I Buy?

Each of the desk accessory packages reviewed here has something special going for it. The makers of FileFinder selected a single set of functions that is of use to all Mac owners—the ability to perform essential file operations without having to return to the Finder. Although FileFinder is slow to initially invoke, file operations are processed quickly and easily. The relatively low price (\$24.95) should be attractive to many, particularly if you don't have a pressing need for the other accessories included in the multi-function packages discussed here.

BatteryPak—the mid-priced (\$49.95) package—concentrates on a small number of important functions: calendar, calculators, operating system helpers, phone dialer, and print spooling. The "no frills" appearance of the accessories doesn't detract one iota from their utility. The bottom line is that they're simple to use and get the job done.

Sidekick attempts to cover all the bases and comes very close to doing so. A quick look at the comparison chart shows that the only functions that Sidekick doesn't include (that its competitors do) are the Finder-type utilities—file manipulation and program launching. Two other things make Sidekick a standout: the polished look of the product—particularly the phone display—and the price. You get a lot of functions with Sidekick, but you pay for them.

The phone functions are Sidekick's strongest entry into the d.a. race. It seems a shame that the dialing function couldn't optionally have used an existing modem. Paying an extra \$45 for mouse-controlled dialing seems a bit much—especially when you consider that this raises the total retail price to \$129.95. If you decide to forego the autodial, as I expect many will, you're still left with an extremely versatile phone package. All other phone functions (the log, timer, notes, consulting fees, phone charges, etc.) can be used whether you dial through the Mac or the old-fashioned manual way. If you're looking for phone functions, Sidekick offers the best selection that I've seen to-date . . . on any machine.

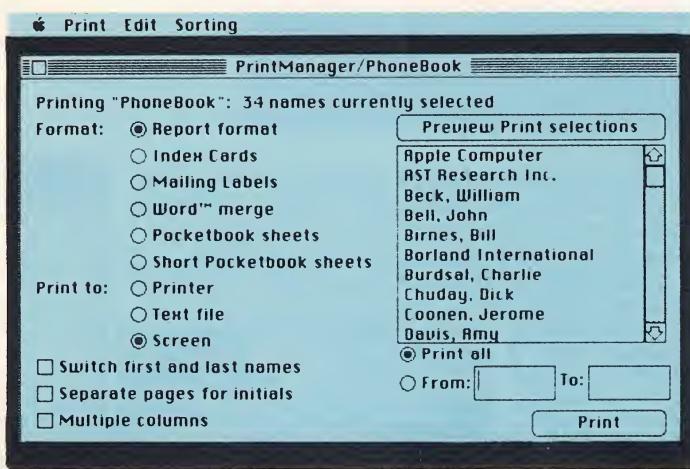


Figure 4. Sidekick's Print Manager. Any QuikSheet, phone book, or calendar can easily be printed in your choice of formats.

Given the option, I suspect many of you would prefer a "mix and match" approach. Within the limits of the desk accessories reviewed here, I selected the following for installation on my Mac: from BatteryPak—the calendar, print spooler, phone pad, launcher, and disk tools; from Sidekick—all of the phone functions (area code lookup, MacDialer, and MacTerm), print spooler, and QuikSheets.

A Final Caveat

Desk accessories are seldom trouble free. Under certain circumstances, they may cause system errors which can result in the loss of data in the current application. Quitting an application without first closing all accessories appears to be a cardinal "no-no" on my Mac XL. In short, use desk accessories with abandon—that's what they're for, but save your work frequently.

BatteryPak is manufactured by Batteries Included, 30 Mural Street, Richmond Hill, Ontario L4B 1B5; (416) 881-9941; retail price is \$49.95.

FileFinder is manufactured by Nashoba Systems, Inc., 175 Sudbury Road, Concord, MA 01742; (617) 371-2029; retail price is \$24.95.

Sidekick is manufactured by Borland International, Inc., 4585 Scotts Valley Drive, Scotts Valley, CA 95066; (800) 255-8008; retail price is \$84.95.

—Steven A. Schwartz

Author's Note: Shortly after this article was completed, I received word from Borland International that a revised version of Sidekick should be available by the time you see this in print. In addition to correcting minor bugs, the new version will add a pulse dialing option in MacTerm, an autodial-through-modem feature and sorting by company in MacDialer and the Sidekick application, a "%" key for the calculator, a dollars-and-cents option in QuikSheets, and user-selectable tab size in NotePad.

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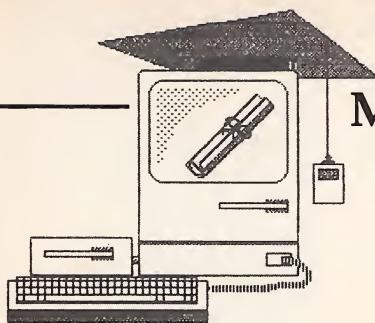
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MACademia

Apple has finally spoken. By the time this column reaches the public, Apple will have announced all of their new and exciting enhancements for the Macintosh. The Apple University Consortium (AUC) is also keeping up with new announcements of their own. Projects keep coming from the schools. Apple has opened up the university purchasing program to community/junior colleges. While there are still only 24 schools in Apples original University Consortium project, the Apple university sales program has expanded to over 200 colleges and universities throughout the world. This expansion has increased the number of projects and controversies surrounding the AUC program.

As it was in the beginning of the AUC program, Apple dealers are again grumbling. It seems Apple dealers may feel the effects of lost sales to students who purchase a Mac through their local community college. However, being involved as a student and an instructor at the community college level, I know many students could not afford a Macintosh unless they purchased it from their respective school at a discounted price. I am also aware that many older, professional people attend community colleges. If these older students purchase a Mac through their school, they may influence their respective businesses to take another look at the Mac as a viable business machine. This could mean more sales to the local dealers who are already taking it on the chin because of discounting at the retail level. The continued growth of the university program and the AUC is helping to insure the continued success of the Macintosh.

Projects

The holidays are over and most of us are getting back to business. The AUC has also been busy creating new projects. Apple has given me some assurances that communications within the AUC community would be improving. I am at least starting to get some of their press releases regarding AUC projects. Hopefully this trend will continue. I can then pass along the news to all of you.

What follows are some new and exciting projects. If you would like to get more information about these projects, please write the contact person at the school.

PROJECT: MacProof

MacProof is from the Automated Language Processing System (ALPS). Beginning with the 85-86 school year, selected faculty are participating in this project. Students composing papers in one of Michigan State University's (MSU) Macintosh/ALPS labs can use MacProof. MacProof will analyze the students writing. This analysis will provide an automatic diagnosis for grammar and syntax, punctuation, spelling, even racist or sexist language. It is estimated that more than 500 students each semester will benefit from using MacProof. The MacProof project is designed to enhance the creative writing process and to demonstrate the impact that computers can have on this creative process.

This first quarter the project is being used with 20 sections (classes) of writing. Writing instructors have compared the same assignments done on a Mac to those done without the benefit of a Mac and MacProof. The subjective feedback from the instructors indicate that writing done with the Macintosh showed more spontaneity, color and emotion than the same assignments done without the Mac. Basically, the instructors found that the Mac enhances creativity while MacProof provides immediate feedback. This feedback helps to improve the technical aspects of the students writing.

According to Dr. Peter Lyman, Assistant Director of Academic Computing at Michigan State, MacProof has the potential to become a standalone application in the future. Dr. Lyman feels the project has been so successful that MSU will probably use MacProof with the entire freshman writing program next year.

CURRENT STATUS: Ongoing. results of the projects evaluation will be forthcoming.

CONTACT: Dr. Peter Lyman, Assistant Director of Academic Computing, 3

PROJECT: Problem Knowledge Coupler

The College of Veterinary Medicine at Mississippi State University is now using a Mac and a program called Problem Knowledge Coupler to diagnose animal illnesses. The program can correlate diagnosis, findings and diagnostic tests to arrive at the most complete diagnoses possible. There are presently two coupler "pro-

grams" in use—Feline Anemia and Canine Cough. Additional programs specific to different species are under development.

CURRENT STATUS: Complete, with more species specific programs under development.

CONTACT: Dr. Philip Bushby, Program Director, College of Veterinary Medicine, Mississippi State University, MS. 39762-5521, (601) 325-3432

PROJECT: The Pennsylvania Extension Network

Macintosh computers link the 67 offices in the Pennsylvania State University (PSU) Cooperative Extension Services to the university mainframe. This network is called the Pennsylvania Extension Network (PEN). PEN can provide up to the minute on-line information about agriculturally related issues to county agents and extension faculty. PEN also enables farmers and other residents throughout the state to communicate electronically via a personal computer and modem. Additional services provided by PEN include development of software programs for the Mac that focus on agriculture, administration, 4-H youth and family living. The Milk Market Comparisons, Land Rent Calculator, and Dairy Barn Ventilation Sizing are just some of the programs already available.

CURRENT STATUS: Complete and ongoing.

CONTACT: Dr. Graham Bell, Support Services Manager, Cooperative Extension Service, 344 Agriculture Administration Building, University Park, PA. 16802, (814) 863-3449

PROJECT: Advanced Technology Learning Center (ATLC)

The ATLC was developed for students and faculty to learn about microcomputer technology. The facility is a 25,000 square foot lab allowing for hands-on learning, experimentation, teaching, research, and curriculum development. Housed with the ATLC is the Classroom 2000, a futuristic educational setting using Macintosh computers and LaserWriters. The Mac was chosen because it was the one computer that matched the schools vision of "state-of-the-art" technology.

CURRENT STATUS: Complete and ongoing.

CONTACT: Dr. Lee Alley, Assistant Vice President for Computing & Communications, Texas Tech University, Box 4120, Lubbock, TX. 79409, (806) 742-1527

The Apple University Consortium is picking up steam. These newer projects are an excellent indication of the continued commitment to the Macintosh by the AUC schools. Some programs may even hit the commercial market. While many of these projects do not appear to have "mainstream value" (commercial) others, like MacProof, may change the way we define literacy. In talking with Dr. Lyman from Michigan State, he felt that a program such as MacProof and CD-ROMS (laser disks) may redefine what a literate person needs to know. Searching databases and volumes of research material with a laser disk may replace the card catalog and encyclopedia. If the "trickle-down" theory of education holds true, it will not be long before many AUC projects become a commercial reality.

—Mark Veljkov

Mark Veljkov is a Contributing Editor who works for Lakeside Computers in Olympia, WA.

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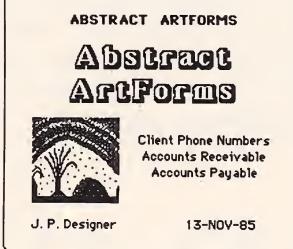
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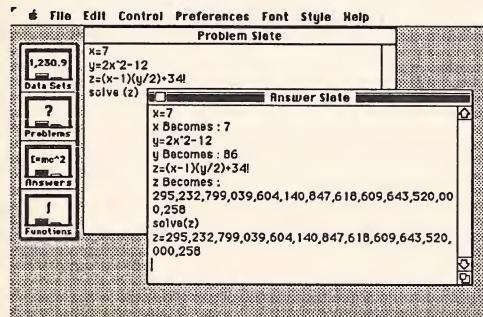
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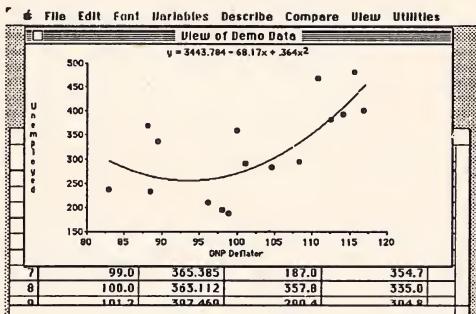


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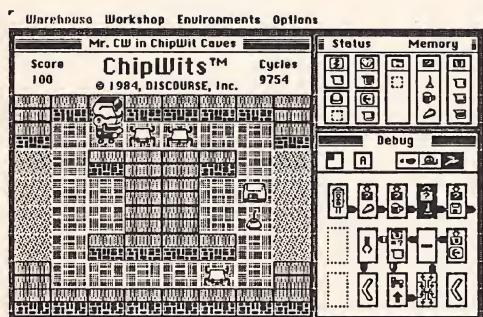


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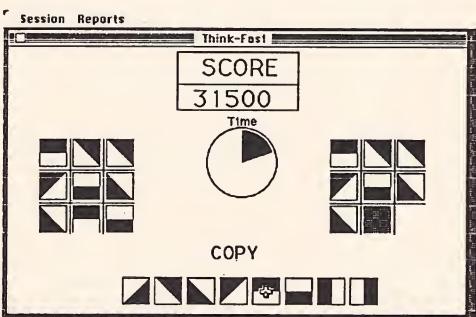
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The Crimson Crown



Antonio Antiochia, gamemaster extraordinaire, has another adventure game hit on his hands. This exciting, illustrated, interactive novel takes the player into the kingdom of Wallachia, and is a superb sequel to the best-selling Transylvania adventure game released last year. However, one does not have to have Transylvania experience to actively participate in *The Crimson Crown*.

This adventure is written in COMPREHEND, a programming environment invented by Penguin Software that allows for complex sentence parsing in addition to magnificent graphics. With a vocabulary of over 1,000 words, the player can concentrate upon solving the mystery, and not on the mechanics of how to phrase solutions.

Included in the package are a beautifully detailed colored map, a journal that is chock-full of clues (but one that requires careful reading), and a sealed parchment that may only be opened when a mystical beast informs you that such may be tampered with. The number of clues within the game should assist in deciphering the material within the parchment, but having a friend or two at hand when reading the parchment might be of enormous benefit in solving a puzzle or three. And don't think that puzzles are merely relegated to the physical periphery that accompany the game! While hunting and exploring and questing within *The Crimson Crown*, one's mind must remain alert to solve many a curious query and numerous difficult . . . albeit deadly . . . situations.

The main problem with adventure game reviews is that, even though reviewers have, of necessity, solved certain predicaments while investigating the environment, one can only hint at puzzles and traps and the like so that the game isn't spoiled for others. Items found within this game are all of use in some regard . . . the question is the sequence in which they are found and when such materials can be used to full effectiveness.

In this adventure, you are not alone, thank goodness. Accompanying you on your investigations is Princess Sabrina

(who many will remember rescuing in Transylvania) and Crown Prince Erik. Each has certain, er, talents, that once realized, can be of enormous boon in the success of your quest. The Crimson Crown itself is being held by the Vampyr, an evil being who is learning all about the crown's magical powers. Should this demonic denizen succeed in learning all of this regal headgear's secrets, Wallachia is doomed . . . and so are you! You'll also find a particularly helpful Sage during your travels, as well as a bird of wisdom and a gryphon who finds riddles a most amusing pastime. Your mapping skills need be sharp, as well as your attention to detail. And remember, everything and everyone is afraid of something!

As many as four games may be saved on the game disk, and a Notebook allows for several pages of hints and discoveries to be recorded as you play. *The Crimson Crown* is enormously engrossing, highly entertaining, and certain to become a best-selling interactive graphic adventure that maintains the highest value as an enter-

tainment software. Penguin Software has even established a "Hint Department" for any of their interactive novels, wherein the player can send away for a hint book for their particular game that is free of charge. The COMPREHEND language was written by Mark Pelczarski and Jeffrey Jay and, due to its portability, will enable Penguin to port their fictions over to all manner of computer systems. The Macintosh version of *The Crimson Crown* was adapted by Robert Hardy. This is truly a worthwhile purchase for those who enjoy interactive fiction.

Penguin Software
830 Fourth Avenue
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Geneva, IL 60134

—Hartley & Patricia Lesser

Hartley and Pattie Lesser are the Publishers/Editors of *Computing Today!*, a bi-monthly computing newsletter. They can be reached via CompuServe at 76566,1561

You are on a lake shore near a sleepy willow tree. A path leads east.
drink water
The water is too brackish to drink.
examine water
You splash about in the shallow water and notice a glint of silver in a crag.
From seemingly out of nowhere appears a spectral sage!

More Desk Accessories

I am really fond of Desk Accessories (DAs); I have installed 18 of them in my XL system. The list comes close to running off the page. I'll probably install a few more, such as Macdialer or the Calculator+. More than likely, my screen won't handle more so, if they can't be displayed, I'm afraid I won't be able to bring them up, for the DA list won't "Scroll" or "Wrap" around. I haven't yet figured out how to bring up a DA I can't see under the . Hey, why doesn't some one come up with a "Scrolling" DA? That would be neat. Anyone have any ideas?

Here is a list of some of the DAs that I have used or tried. For most of them, there's a short description of what each does, where you can get each, (@= Apple; *= MAUG; **= A Public Domain disk from some User's group), size in bytes, and even my comments, for what they might be worth. New DAs turn up every day. In the meantime, look this list over and try out a few. Incidentally, with a Hard Disk, you need not be concerned about byte size. The total for my group of DAs is about 100,000 bytes, and it is also limited by what can be shown on the screen.

I wanted a keystroke to give me something resembling, the Font/Da Mover Icon, so I used FONTastic to create this little baby. I pulled up Manhattan 12 and displayed the Right Bracket Key, then clicked on Edit, and redesigned that Key to produce the . How about that? FONTastic is tip-top as a Font Editor. I made a bomb using the Left Bracket Key.

ABACUS If you need one, this is a good. Why would one need an Abacus today, unless there is Chinese ancestry somewhere in your background? (*; 1400? bytes)

AREA CODE LOOKUP Just that, type in the area code, and from an area code file on your disk, the city or region covered and any other pertinent details, are displayed. I suppose it's quite useful, if you need Area codes. (Sidekick ? bytes)

BIG CURSOR With an animated icon & related resources added. Despite my

advanced age, my eyesight is not quite that bad—yet. I hope I won't need this one for a while.

CALCULATOR Dump this Apple DA immediately. Replace it with a better one from the list below.

CALCULATOR New version of the old scientific/engineering/hex calculator. Improvements: numeric pad entry, screen dumps of ASCII chart, several memory-related problems fixed. (*; **? bytes)

CALCULATOR+ One of the best. It has a display called tape, which records all you do, like the tape on an actual machine. Your tape may actually be printed out. A fascinating little thing-a-mabob. (Sidekick 5862 bytes)

CALCULATOR A full fledged Mac clone of the HP 12C financial calculator. You can do things with this one on the Mac, that you can't do on the real one. (Dreams of Phoenix)

CLICKON SPREADSHEET This of course, is a commercial DA by T/Maker. If you don't need a large spreadsheet, this jobbie fills the bill admirably. Installed under the , it gives you a 50 line and 26 column Multiplan-like spreadsheet (Jazz, Excel, Crunch, take note) (T/Maker 25269 bytes)

ALARM CLOCK This is the familiar DA from Apple. I make it a practice to remove it immediately from any new application system. I suppose it's worthwhile if you are in the habit of forgetting to go to bed while working with your Macintosh (I always do). You can set the clock when you begin work, and it will warn you when to hit the sack. Nuts, I don't want anybody or anything telling me that time's up. I'll darn well go when I get ready, or when my wife yells, "Are you coming to bed?" She's a much better prompter, I'd say.. (@? bytes)

CLOCK A nice analog clock with a second hand, which ticks away the seconds. (Sidekick ? bytes)

CLOCKS There are all sorts of clocks. There are digitals and analogs of all sizes—one which turns the entire screen black and shows a ticking analog clock in reverse (White). There's Big Ben, Lisa Clock and an original Dali-like display which revolves the digits by seconds.

CONTROL PANEL This is furnished with all Macintosh systems when you buy your Mac. It's well described in your Mac manual, so I won't cover it here. If you haven't mastered it yet, get with it, as it's an important adjunct to Mac's successful operations. (@; 25269 bytes.)

DAFONT This is a Shareware Desk Accessory, that will show the Font statistics of Fonts loaded into your System file. This little jewel is a must. I use it often. When you select a Font and you bring up an attractive dialog box asking your choice. Ask for Font Display and you get the individual footprints of each font in your System, as displayed below. Ask for Font Info, and you see the statistics on each Font. Ask for DA Information, and you'll get a list of the DAs in your System by ID, name and byte size. It's a handy mini-program to have. Here's how it displayed a few of my Fonts. (*; **; 5390 bytes)

DAFont
Manhattan 12
48 NY Inli
Ham 14
son 12
E4 Cooboy Sod

Manhattan 24

CLICK...

DAFont
Boston 12
Venice 24
Scan 48
NYitalic 18

Broadway 18
Chicago 12
Geneva 9
Geneva 12

CLICK...

DA SAMPLER PREVIEW Application to allow previewing of DA without actually installing it.

DA KEY (Version 1.1). Disabled if MiniFinder is running, since MiniFinder hasn't initialized all the needed managers.

DA KEY INSTALLER. Version 1.1 of Install Date Key. This version allows you to remove it as well as install it, without resorting to ResEd, and also includes a change in Date Key that may fix the problem some people have reported with some hard disks.

FKEY 8. This program installs an FKEY 8 resource into your system file which implements a large (32 by 32) cursor. Typing command-shift-8 toggles the size of the cursor. (*? bytes)

FKEY 9. Continuity Installer An INIT resource which can automatically open desk accessories. (See below)

FKEY. resource to paste a screen area into clipboard. Hitting control-shift-9 lets you sweep out a rectangle on the screen and pastes the contents of that rectangle into the clipboard. Incidentally, since installing FKEY looks tricky, I haven't tried it. Again incidentally, there's a way to install Shift-[] 0, and your Mac will Reset, but be careful when using this reset button; my XL lost my file when I hit this command.

FILE INFO or EXTRA. Either DA is a helpful addition to the Apple Menu. You can do all sorts of things with either. Show Disk Space, Show Free Memory, Compact Memory, Delete or Rename files, Show invisible files, Verify or switch to another file, using Set Quit File. From time to time, on my XL, I get a Systems Error, Restart Dialog box when I try to change applications. Because of this pesky thing, I avoid using Extra. However, it's a great mini-program. (*; **; 14,000+ bytes)

IDLE. Saves your screen. Turns it black, but displays an attractive miniature Mac randomly floats all over the screen. Since the XL's Hard Disk turns at 3600 revolutions per minute, Apple advises that you turn it on when you start up in the morning, and off at night. I turn mine on first thing in the morning, and then shut it down the last thing before I go to bed. I leave it idling whenever I'm away from the computer for any length of time. (*; **; 598 bytes.)

BBC.SLEEP. This is another screen saver. This one puts a BBC Icon on the black screen, which floats around on you as it pleases.. (*; **;)

KEY CAPS (NEW). Here, at last, is a version of the NewKeyCaps DA that doesn't get "broken" by the Font/DA Mover. This DA places a new Menu—Key Caps—on the menu bar, which, when pulled down, lets you choose any font in the system, to display in the Key Caps box

on your screen. A useful DA, although, on Fonts like Cairo 36, the keyboard picture gets clobbered. Some XLS refuse to load this mini-program correctly. No matter what one tries, the Old Key Caps comes up. You can correct the ID and make this work, however. (*; **; 3732 bytes)

MAC DIALER. Permits you to dial, via modem, from a list of telephone numbers. A file of telephone numbers must be kept on your disk. (Sidekick)

MIGHTY FINDER This is a Mini-finder, Set and Get Info program. This new version fixes the bug in Launcher. (**)

MOUSE MAGNIFY. Locates mouse position in Local or Global Coordinates with "Magnifying Glass." Shows a view, in fatbits of area of interest. (*)

NOTE PAD. I used to remove this DA. Now I have reinstalled it to store the telephone numbers that I need while working with the computer: Compuserve, Dow Jones, Delphi, The Source and the various bulletin boards, I download from. Also, it's most helpful when you are scanning messages and programs for possible downloading on MAUG, or reading the For Sale items on POST APPLE, on the SOURCE. I jot down the Message number, the file number that I want to go back and read. Note Pad is not large, but Quick & Dirty, by Dreams of the Phoenix, has a larger SuperNote pad, if you need it. (@? bytes)

NUMCAPS. A DA that allows you to cut any character of any font to the clipboard. The character is specified by its character code. So what? (*; **; ? bytes)

QUICK PRINT. Quick Print Version 0.5 is a valuable desk accessory which supports rapid printing of text files within applications such as MacPascal and several communications packages. Features include, tabs, adjustable margins, optional line numbering, optional page heading, and font selection (if connected to an ImageWriter). (**)

PRAM. This is a Parameter RAM/Control Panel Utility which hopefully is both educational and useful. It allows you to set those parameters that cannot be changed by using the Alarm Clock and Control Panel DAs (default font, serial port characteristics, etc) PRAM also explains what each p-ram location is used for. This, version 2, works on all hard disks, floppy disks and from within Switcher. I have yet to play with it. (**)

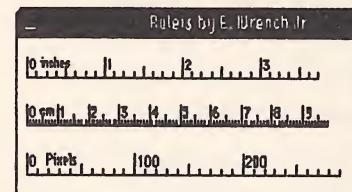
PROCOUNT. This DA counts words in a text file that are four letters or larger. I often need an accurate word count for stories and articles I write. (*)

PUZZLE. No comment. Use it once or twice and then discard forever.

REDIPRINT. A very nice print spooler. I like it because I can use it when I want to, and I am not forced to use it, once I set it up, as on my Hard Disk drive. Just don't need a spooler, when printing out a Mac-paint creation. (Sidekick again)

SIEVA DA.rsrc. The Sieve of Eratosthenes. Find Primes. I suppose since it will give you the time needed to accomplish the task in 1/60th seconds, it can serve as a valuable benchmark for comparing different computers or hard disks.

RULER. I got this handy little DA from Accessory Pak I (Silicon Beach Software). With its Ruler installed, you will have a ruler displayed in inches, centimeters or pixels. Occasionally, while working with it, the blamed thing will leave a tool on your screen until you click it off. For this reason, I dispose of the rulers by clicking again on Ruler when I'm through measuring, then I continue on in MacPaint as long as necessary. It's so useful when you need it that I can put up with its wanton playfulness. (6586 bytes)



SCRAPBOOK. This is the old familiar Scrapbook that we use all the time. It's the same Scrapbook you see when you open up the Systems folder. You can use this wonderfully well, if you will take a little trouble to set things up. Make a Scrapbook file. To do this load up your present Scrapbook. Copy it, by dragging across to your new disk. Trash the Scrapbook in your Systems file. Your Systems file will "create" another Scrapbook file. Rename that to Scrapbook1. Drag Scrapbook1 across to your scrapbook disk. Keep this up as long as you wish to. When you have enough Scrapbooks, drag the original Scrapbook to System. If you want to substitute Scrapbooks, drag Scrapbook (first change to Scrapbook number to number) to your Scrapbook in System, click on yes to "replace old Scrapbook". You are in business. Better still, use the DA Multi Scrap, Art Grabber or the Application Painter Cutter, to get pictures, etc from any of your Scrapbooks (@, Bytes depend on what you have in Scrapbook)

SCRAPBOOK CHOSER. Lets you display any item in any other Scrapbook, when said Scrapbook is on a disk in your machine. Nice, useful, easy to work with and wonderful for making and using the Scrapbook disk, I spoke of above. (Delphi)

SHOW PICTURE. Simple desk accessory that puts a PICT resource in a win-

The call is free, the

✓denotes Mac XL compatibility.*

SOFTWARE

Addison-Wesley	
Smart Eyes	\$36.
Altsys	
Fontastic (create your own fonts)	27.
Arrays/Continental	
Home Accountant (reqs. external drive)	52.
Assimilation	
Mac-Memory-Disk (reqs. 512k)	22.
Mac-Tracks	22.
Business-Essentials	65.
Right-Word	69.
Mac-Spell-Right	69.
Batteries Included	
The Mac BatteryPak	27.
Blyth Software	
Omnis 3 (requires 512k, external drive)	245.
Borland International	
Sidekick (non-protected)	44.
BrainPower	
PowerMath (requires 512k)	52.
Statview (statistics package)	99.
CAMDE	
Nutricalc (to your health!)	49.
Casady Company	
Fluent Fonts (two-disk set)	29.
Central Point Software	
Copy II Mac (includes MacTools)	20.
Creighton Development	
MacSpell+ (requires 512k)	55.
Dreams of the Phoenix	
Day Keeper Calendar	27.
Quick & Dirty Utilities Vol. 1	27.
Twelve-C Financial Desk Accessory	27.
Electronic Arts	
Pinball Construction Set	27.
Financial Cookbook	32.
Deluxe Music Construction Set	32.
Enterset	
Quickpaint (find Paint files fast)	29.
Quickset (icon-driven accessory)	29.
Quickword (word processing tool)	32.
1st Byte	
Speller Bee (improves spelling)	42.
KidTalk ("talking notebook")	42.
Smoothtalker 2.0 (voice synthesis)	57.
Forethought	
Factfinder	84.
FileMaker	108.
Fortnum/Southern	
MacNooga Choo-Choo (reqs. 512k)	21.
MacChemistry	89.
Great Wave Software	
Comet Halley	18.
ConcertWare+	39.
Hayden Software	
DaVinci Buildings	29.
DaVinci Interiors	29.
DaVinci Landscapes	29.
DaVinci Building Blocks	46.
Art Grabber w/Body Shop	29.
I Know It's Here Somewhere	35.
Musicworks	45.
Hayden:Speller	45.
Videoworks	57.
Score Improvement System for the SAT	57.
Hippopotamus Software	
Hippo Computer Almanac	21.
Hippo-C - Level 1	79.
Hippo-C - Level 2	219.

Ideaform	
MacLabeler (prints disk labels)	\$29.
Innovative Data Design	
MacDraft (requires 512k)	139.
Kensington	
Graphic Accents	29.
Professional Type Fonts for Text	29.
Professional Type Fonts for Headlines	42.
Legisoft/Nolo Press	
WillWriter	27.
Linguist's Software	
MacCyrillic	39.
MacSuperFrench/German/Spanish	39.
Tech (1000 different symbols)	59.
MacArabic	59.
MacHebrew	59.
MacKana/Basic Kanji	59.
MacKorean	59.
MacSuperGreek	59.
MacGreek/Hebrew/Phonetics	89.
Living Videotext	
ThinkTank 512k	125.
Magnum	
McPic - Volume 1	28.
McPic - Volume 2	28.
The Slide Show Magician	34.
Manhattan Graphics	
ReadySetGo (requires 512k)	call
Mark of the Unicorn	
Professional Composer 2.0 (reqs. 512k)	249.
Microsoft	
Entrepreneur (business simulation)	29.
Learning Multiplan and Chart	37.
Chart	72.
Logo	75.
Basic 2.1	87.
Multiplan	107.
File	111.
Word	111.
Fortran	179.
Excel	225.
Miles Computing	
Mac the Knife - Volume I	21.
Mac the Knife - Volume II (fonts)	25.
Mac the Knife - Volume III	27.
Mindscape	
The Perfect Score: SAT	47.
Monogram	
Forecast (tax planner)	40.
Dollars & Sense	81.
Nevin's Microsystems	
Turbocharger (requires 512k)	55.
New Canaan MicroCode	
Mac Disk Catalog	25.
Odesta	
Helix (requires 512k, external drive)	219.
Organizational Development	
Consultant (idea management)	119.
Palantir	
MacType (supports Dvorak keyboard)	26.
MathFlash	26.
WordPlay	26.
Accounts Receivable (requires Basic)	69.
General Ledger (requires Basic)	69.
Inventory Control (requires Basic)	69.
inTouch (communication to emulation)	79.
PBI Software	
Icon Switcher	14.
Icon Fun & Games Library	14.
Icon Business Library	14.
Peachtree	
Back to Basics General Ledger	\$88.
Accounts Payable	88.
Accounts Receivable	88.
ProVUE Development	
OverVUE (version 2.0)	149.
Rubicon Publishing	
Dinner at Eight (recipes to wines)	35.
Silicon Beach Software	
Accessory Pak 1	24.
Simon & Schuster	
Paper Airplane Construction Set	24.
Typing Tutor III	31.
SoftStyle	
Epsstart	27.
Decision Map	79.
Springboard	
Art a la Mac Vol. 1-People and Places	23.
Art a la Mac Vol. 2-Variety Pack	23.
Symmetry	
QuickDisk (requires 512k)	21.
Telos Software	
Filevision	99.
Business Filevision	219.
T/Maker	
Click Art Personal Graphics	29.
Click Art Publications	29.
Click Art Letters	29.
Click Art Effects	29.
ClickOn Worksheet	46.
Think Educational	
Mind Over Mac (five games)	29.
MacEdge II (math and reading)	29.
GAMES	
Activision	
Hacker	27.
Mind Shadow	27.
Aegis Development	
MacChallenger (flight simulation)	23.
Ann Arbor Softworks	
Grid Wars	28.
Bantam Electronics	
Sherlock Holmes: Another Bow	27.
Blue Chip	
Millionaire (stock market)	30.
Tycoon (commodities)	30.
Baron (real estate)	30.
Squire (personal finance)	30.
BrainPower	
Think Fast (improve your memory)	23.
Chipwits (robot adventure)	26.
Broderbund Software	
Lode Runner	24.
Cyborg (sci-fi text adventure)	24.
Ancient Art of War	27.
CBS	
Murder by the Dozen	25.
Electronic Arts	
One on One/Dr. J vs Larry Bird (reqs. 512k)	27.
Epyx	
Rogue	24.
Temple of Apshai Trilogy	24.
Winter Games	24.
Gamestar	
Championship Star League Baseball	22.
Hayden	
Perplexx	24.
Sargon III (computer chess)	29.
Infocom	
Seastalker (junior)	24.
Cutthroats (standard)	24.

*according to the manufacturer.

service is priceless.

Enchanter (standard)	\$24.	Mac-Daisywheel Connection	\$79.
Hitchhiker's Guide (standard)	24.	Mac-Turbo-Touch	79.
Planetfall (standard)	24.	Numeric-Turbo	129.
The Witness (standard)	24.	Curtis Manufacturing	
Wishbringer (standard)	24.	Diamond (six outlets)	28.
Zork I (standard)	24.	Emerald (six outlets; 6 ft. cord)	34.
Zork II (advanced)	27.	Sapphire (three outlets; EMII/RFI filter)	44.
Zork III (advanced)	27.	Ruby (six outlets; EMII/RFI filter, 6 ft. cord)	50.
A Mind Forever Voyaging (advanced)	27.	Ergotron	
Infidel (advanced)	27.	MacTilt	75.
Sorcerer (advanced)	27.	Hayes	
Suspect (advanced)	27.	Smartmodem 1200	call
Deadline (expert)	29.	Smartcom II (communications software)	86.
Spellbreaker (expert)	29.	IO MEGA	
Starcross (expert)	29.	Bernoulli Box (5-megabyte storage)	1315.
Suspended (expert)	29.	Kensington	
Invisiclues (hint booklets)	6.	External Disk Drive Cover	8.
Mark of the Unicorn		Mouse Pocket	8.
Mouse Stampede	23.	Mouseway	8.
Miles Computing		Mac Dust Cover	9.
Fusillade (fast action shoot-out)	21.	Imagewriter Dust Cover	9.
MacAttack (3-D tank simulation)	27.	Mouse Cleaning Kit w/Mouse Pocket	16.
Harrier Strike (3-D flight simulation)	27.		
Mindscape			
Balance of Power	30.		
Déjà Vu (murder mystery)	33.		
Origin Systems			
Exodus: Ultima III	38.		
PBI Software			
Feathers in Space	21.		
Strategic Conquest	29.		
Fokker TriPlane Flight Simulator	35.		
Penguin			
Xyphus	24.		
Crimson Crown	24.		
Psi-on			
Psi-on Chess (3D chess)	31.		
Scarborough Systems			
Make Millions	29.		
Sierra On-Line			
Championship Boxing	24.		
Frogger	24.		
Ultima II	35.		
Silicon Beach Software			
Airborne! (great graphics and sound)	21.		
Enchanted Scepters	24.		
Sir-Tech			
MacWizardry	36.		
Spectrum Holobyte			
GATO (submarine simulation)	26.		
Unicorn			
Futura (sci-fi adventure)	24.		
Utopia (science fantasy game)	24.		
Animal Kingdom (grades 1 thru 6)	27.		
MacRobots (pre-school program)	27.		
HARDWARE			
Assimilation			
Mac-Port-Adaptor	69.		
Mac-Epson-Connection	75.		
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Sydewyndr 245.			
Systems Control			
MacGard (includes two outlets) 55.			
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Thunderscan (high-resolution digitizer) 175.			
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Imagewriter Cover 8.			
Mac & Keyboard (two covers) 10.			
Diversions			
ColorPack 19.			
Environmental Software Company			
The Clutch (holds 8 disks) 9.			
MACATTIRE (Rip-stop nylon covers)			
External Drive Cover 7.			
Numeric Keypad Cover (fits Turbo Touch) 7.			
Imagewriter Cover 11.			
Wide Imagewriter Cover 13.			
Mac & Keyboard Cover 15.			
Laserwriter Cover 17.			
Mac XL & Keyboard Cover 20.			
I/O Design			
Imagewriter Color Transfer Ribbons 10.			
Imageware (Imagewriter case) 45.			
Macinware (Mac carrying case) 59.			
Kalmar Designs			
Teakwood Roll-Top Case (holds 45 disks) 14.			
Teakwood Roll-Top Case (holds 90 disks) 21.			
Magnum			
Mouse Mover 14.			
Moustrak			
Moustrak Pad (standard 7" x 9") 8.			
Moustrak Pad (large 9" x 11") 9.			

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5551

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***Defective software replaced immediately. Defective hardware replaced or repaired at our discretion. Some items have warranties up to five years.**

Circle 41 on Reader Service Information card

dow. Full source code in DL3.

SIEVA DA.rsrc. The Sieve of Eratosthenes. Find Primes. I suppose it since it will give you the time needed to accomplish the task in 1/60 the seconds, it can serve as a valuable benchmark for comparing different computers, or hard disks.

SORTMENU. This is a new version of the SortMenu program. Running this programs installs code in the system heap that patches the "Addresmenu" routine, causing your desk and font menus to appear alphabetized, until the next time you reboot. This version fixes a heap compaction bug in the earlier version that would cause it to crash in some versions.

TIME. This is a superb DA. Everybody should have Time installed. It's included on Accessory Pak I—by Silicon Beach. Time puts the time of day in the upper right hand corner, above the Menu bar, and displays it, until you cut the Mac off. (1880 bytes)

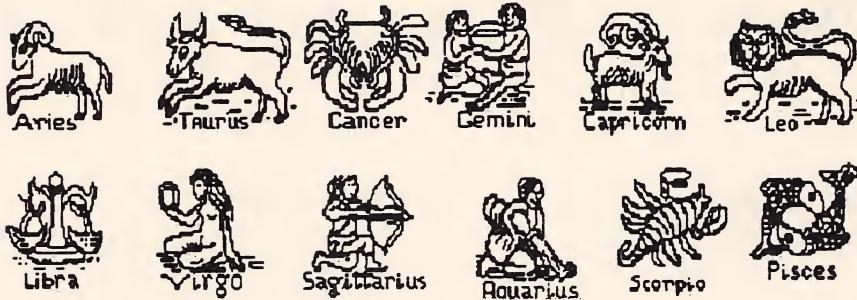
TOGGLE KEYS. A goodie. I use Toggle Keys constantly. If you write a good deal, as I do, you'll love it, for Toggle Keys makes the comma and period active, in both Upper and Lower case. In other words, it substitutes the comma and period for the greater than (>) and smaller than (<) symbols. (*; **; 218 bytes)

WINDOW MENU. Adds "Windows" menu to any application. Lets you bring a window to the front without having to move or shrink the windows in front of the desired one.

WAYSTATION 1.6. A minifinder which supports desk accessories and allow applications on multiple disks (or hard disk volumes) to be configured. This version allows up to 27 applications (but not documents) to be configured; only the names, not icons, are displayed. If WayStation is on the system disk, and if Apple's MiniFinder is NOT on the system disk, then you will return to WayStation when you quit an application.

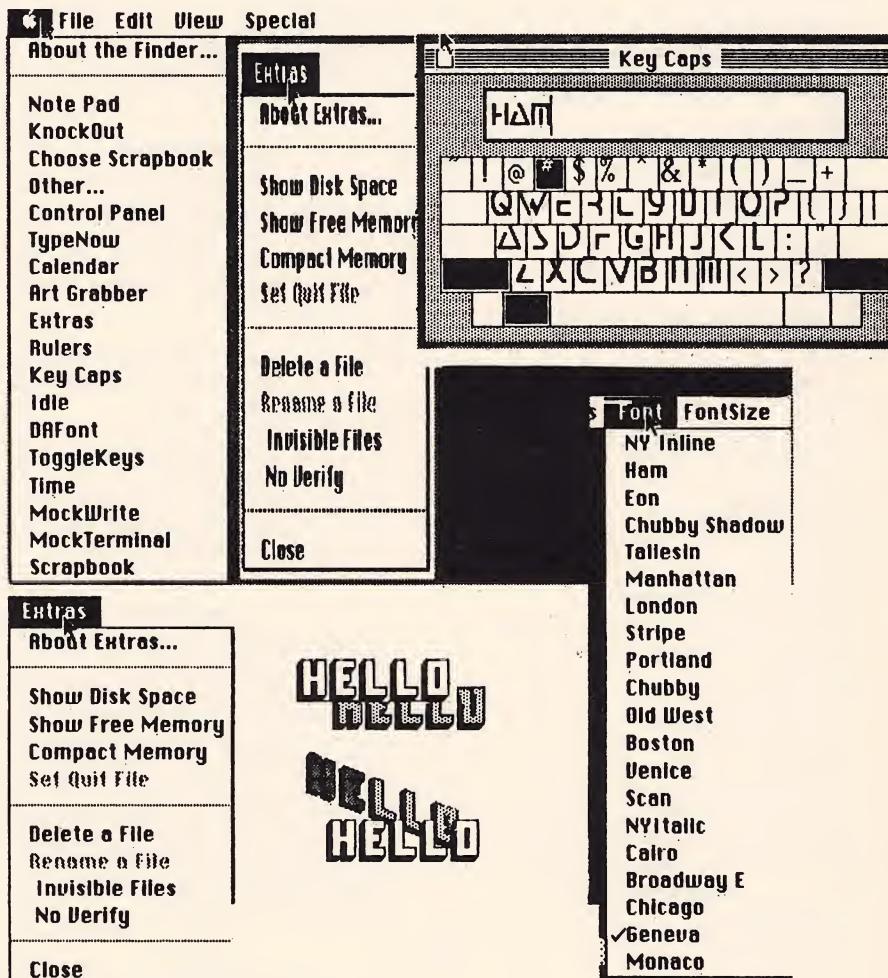
WRAP. (An annoying DA from the author of Bouncy.) Just when you thought it was safe to download desk accessories, the unknown programmer strikes again!

WTEDA . . . WORLD TIME. Shows time in Tokyo, Cupertino, Boston, New York, London, and Paris. (**)



ZODIAC. I thought it was a DA. It's not. It's a Font, by gosh. However, it's so original I listed it here. The only earthly use I can see for it, is to impress your visitors when you show off your Mac. After installing Zodiac in your system file, you

can display the 12 signs of the Zodiac by pressing the keys 1-0 for Aquarius to Scorpio. Press "-" for Sagittarius and "=" for Capricorn. Display in 18 point for best results.



I have added a couple or so Snapshots from these DA's for your interest. I have also shown my DA display under the ⚡ and the Font Display. I threw in the Hello screen, I did with Click Arts "Effects" DA.

—William Lathrop

Announcing the first USER show for the Macintosh Computer



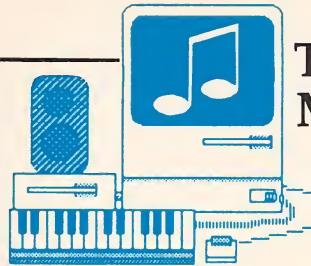
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The Well-Tempered MAC

Letters from Readers

I appreciate the favorable response to this column and enjoy the correspondence that it has generated. Please continue to send me your questions about music on the Mac and specific topics that you would like to see addressed.

This month I would like to answer a letter from Mrs. Millan of Sacramento, CA, who inquires about the availability of a MIDI piano tutor for the Mac which would allow her to hook up a synthesizer to the Mac and give her lessons on how to play.

As I write this, there is no such software available, but some is coming. Musicworks is advertising two programs: MacMIDI Piano Lessons 1-6 and Melody Master, both of which are in the works. Musicworks tends to advertise programs long before they are ready for release, so be patient. Another company which wishes to remain anonymous for the moment is developing software that it hopes to release next summer.

It is only a matter of time before educational music programs for the Mac become available. No one can predict whether the first programs will be at all useful. My suggestion to Mrs. Millan is not to postpone the joy of learning to play but to find a good piano teacher.

Screaming Macs

There have been a number of rumors going around about "screaming Macs"—Macs that have blown their power supply boards after being connected to synthesizers. Initially it was unclear whether the problem was with the interfaces, most of which draw power from the Mac, or with the Mac itself. One rumor had it that Macs with certain serial numbers were at fault.

The official word from Apple is that the transformer on the power supply board of a very small but unknown number of Macs are out of spec. These transformers came from a third party supplier. Apple became aware of the problem many months ago and changed suppliers. Apple will pay dealers to fix the problem on any Mac under warranty that blows its transformer. Apple cannot predict how many Macs will have a problem and under what circumstances a problem might result. Apple's spokesperson said that the odds of a problem resulting from hooking a synthesizer to the Mac are slight and suggests that no one hesitate doing so.

It should be noted that Apple's own spec should allow you to put a properly designed MIDI interface on your Mac. If you are one of the unfortunate minority who runs into trouble and finds that the warranty has expired, Apple suggests that you take your Mac to your dealer. If you do not receive satisfaction, I am told that you should call Apple's service department at 408-996-1010. Apple will not state that it has a policy for paying for repairs on Macs out of warranty, but Apple acknowledges that it has made exceptions and paid the cost of repairs.

The interface from Southworth Music Systems is the only one which does not draw power from the Mac. It includes sophisticated sequencing software called Total Music, is not sold separately, and retails for \$486. In fact, as a form of copy protection, Total Music software will not work on any other interface. The interfaces from Opcode, Kette, and Musicworks draw power from the Mac but are optoisolated according to the MIDI specification. Optoisolation electrically separates the electrical current driving the synthesizer from current in the Mac so that there is no direct electrical connection between the two. This prevents the voltage fluctuations from the synthesizer from hurting the Mac.

The interface from Assimilation that has been circulating in prototype form amongst developers does not have optoisolation. The developer considers it unnecessary. I'll look into this issue later if and when it comes to market.

Compatibility Update

In the November issue I mentioned possible compatibility problems between MIDI software and hardware that use different clock speeds. Interfaces from Kette and Assimilation use a clock speed of 1 Mhz. Musicworks and Southworth use 500 KHz. Opcode's interface can switch between all three possible settings: 2 Mhz, 1 Mhz, and 500 KHz. Some of the software allows the user to adjust the software to the hardware. The rest of the software runs at either 1 Mhz or 500 KHz.

Musicworks provides a desk accessory free of charge for non-commercial use which will enable any software to run at 500 KHz. I have used it successfully with the Deluxe Music Construction Set which

otherwise runs at 1 Mhz. This means that the only compatibility problems that you may encounter with interfaces and software would be with trying to run 500 KHz software with a 1 Mhz interface. Software from Musicworks will not run on interfaces from Kette or Assimilation, so shop carefully.

Making the MIDI Connection

Making the correct connection the first time between the Mac and a synthesizer can be a little complicated. MIDI data can be transmitted on any or all of 16 channels. Care must be taken to match the transmission and reception modes. Software and hardware manufacturers do not always employ the same terminology in their instructions even though the MIDI specification is quite explicit.

Figure 1 lists the names and numbers of the four different sending and receiving modes. You may note that three modes have earlier names which are still used by different manufacturers. Before the MIDI spec (currently version 1.0) was finalized on August 5, 1983, technicians at Yamaha misinterpreted the term Mono and ended up creating what became the second mode, Omni On/Mono.

Before taking a look at how to connect a Casio CZ 101, a common and inexpensive 4 octave MIDI synthesizer (\$495), to ConcertWare + MIDI, the new version (3.01) of ConcertWare, let me explain what the four MIDI channel modes are all about.

When the Mac or a synthesizer receives in Omni On/Poly mode, data can be received on all ("Omni") of the 16 channels. In addition, more than one voice ("Poly") can be received at a time. In the Omni-On/Mono mode, data can be received on all 16 channels but will be interpreted as one voice ("Mono").

In the Omni Off/Poly mode, data can be received on only one channel ("Omni Off"), and many voices ("Poly") can be received. The Omni Off/Mono mode is all together different. Data can be received on several consecutive channels, one voice ("Mono") per channel.

In setting up communications I have found that it is easiest to choose the receiving mode first and then try to match the transmission mode. Suppose you would like to send notes from the Casio to the

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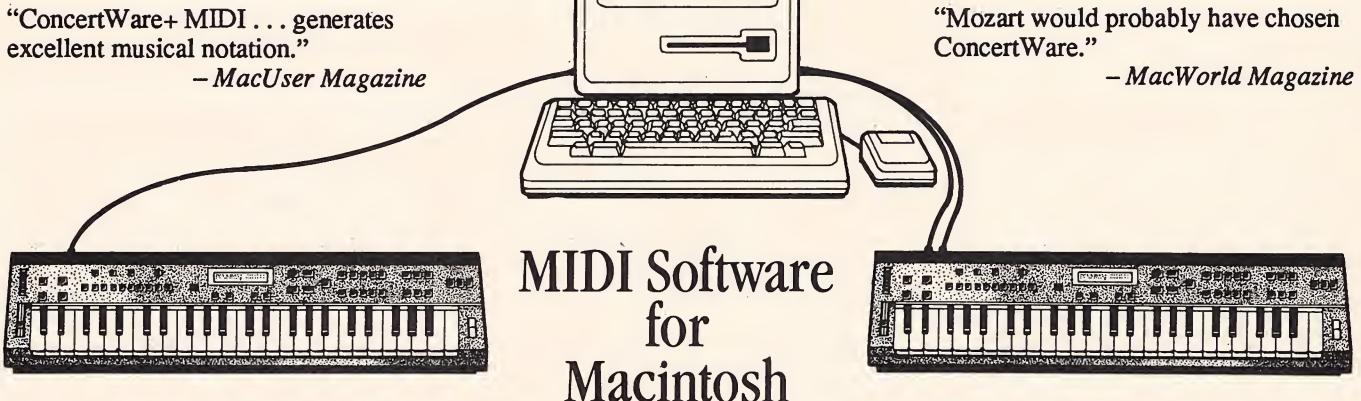
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ConcertWare + MIDI Writer. You will first note that the MIDI setup box in Figure 2 shows that the Writer will receive transmission in modes 1, 3, and 4. The setup box uses the older terms Omni, Poly, and Mono. Additionally you must keep in mind that while the Writer can be used to create eight voice music, the Writer will only record one of the eight voices at a time and that the channel modes must be reinterpreted slightly to account for this.

The simplest way to record each voice in the Writer is by using the Writer's Omni mode (mode 1). The Casio can play four, sometimes eight, voices at a time, but you should only play one since the Writer will interpret all data as one voice. Because this mode will accept transmission on any MIDI channel, it does not matter which channel the Casio is sending on. It also does not matter which channel is designated as the basic channel in the Writer's MIDI setup box.

If you choose the Poly mode (mode 3) for the Writer, the Writer will only receive on the channel that you have designated as the basic channel in the setup box. You will have to set the transmitting channel on the Casio to match. You will probably not need to use this mode unless you have other synthesizers playing at the same time transmitting data on the same cable to the Mac. If this is the case, make sure that the other synthesizers are transmitting on channels other than the channel you designated as the basic channel. In this way you will be filtering out all MIDI data except data for the voice you wish to record.

The Mono mode (mode 4) would only be used if there are several voices being transmitted from various sources on various channels. If you set the basic channel to 1 and are recording voice number 1, whatever voice data is sent on channel 1 will be recorded as voice number 1 all other channels being ignored. When it comes time to record voice number two, if the basic channel remains as channel 1, whatever data is received on channel 2 will be recorded as voice number 2 all other channels being ignored. Each subsequent voice will be recorded on the next consecutive channel. It gets a little complicated doesn't it?

When playing back music recorded on the Mac through the Casio, the Casio's receiving mode should be defined first. Thirty of the Casio's 32 preset and internal sounds that come with it from the factory can handle only four voices, the other two can handle eight. For the purpose of illustration, let's examine a composition with four voices.

The Casio will receive in modes three and four only. If you want all four voices to have the same instrumental sound (timbre), make sure that the solo key is off. The Casio is now in the Poly mode (mode

MIDI Channel Modes		
Mode Number	MIDI Spec Version 1.0	Old Name
1	Omni On/Poly	Omni
2	Omni On/Mono	—
3	Omni Off/Poly	Poly
4	Omni Off/Mono	Mono

Figure 1 lists the various names for the MIDI channel sending and receiving modes.

Sending:		Receiving:																																					
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Figure 2 shows the ConcertWare + MIDI Write configured to receive one voice in the Omni mode and to send voices 1 through 4 to a Casio CZ 101 receiving in the Poly mode.

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Figure 3 shows the Writer configured to send up to eight voices to as many as two Casios receiving in the Mono mode.

3) and will receive four simultaneous voices so long as they are sent on the same channel. Select the channel on which you would like the Casio to receive. It doesn't matter which one. Then set the four voices that you wish to send from the Writer to the same channel. Figure 2 shows how you might send voices 1 through 4 to the Casio on channel 1. (Voices 5 to 8, if any, are sending on other channels and are ignored by the Casio.)

If you want the Casio to play those same four voices with different timbres you must put the Casio in the Mono mode (mode 4). You can do this by pressing the Solo key. Why it isn't called the Mono key is beyond me. This will make the Casio think that it is four separate monophonic synthesizers each having a different timbre. In this case the Casio will receive one voice on the channel you have chosen as the Casio's basic channel. The other three voices will be received on the three subsequent channels.

Figure 3 shows one way to set up the Writer to send to the Casio when the Casio is in the Mono mode. Assuming that the Casio's basic channel is set to number 1, the Writer should send voice number 1 on channel 1, voice number 2 on channel 2, etc. If you have two Casio's and your piece has eight voices, the second Casio could be set to receive on channel 5 and play voices 5 to 8 which are sent consecutively on channels 5 to 8.

With a little experimentation you will find that MIDI can be almost as friendly as the Mac itself. The same basic procedures outlined here can be followed with other synthesizer/software combinations. Just keep in mind the definitions of the basic MIDI channel modes and adapt them to the particular limitations of your synthesizer and software.

Next month I will examine the way in which a MIDI program sends instrument changes (sometimes called program changes) from the Mac to a synthesizer and ways in which one can store customized instrumental sounds for a synthesizer on a Macintosh disk using software called a patch librarian.

 —George Litterst

Our Music Man George is a Contributing Editor and a professional musician based in Boston. Besides performing, he teaches at Northeastern University and the New England Conservatory Extension Division.

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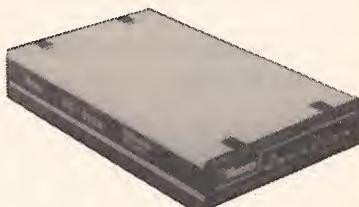
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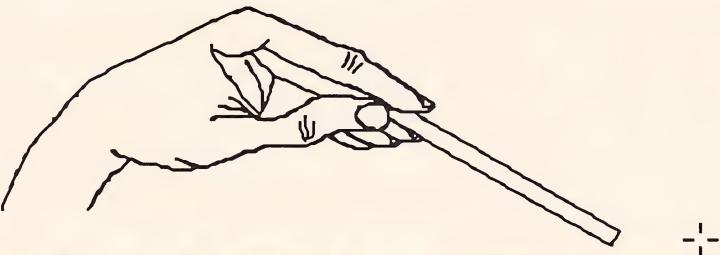
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SmoothTalker

A plethora of products are available for the Macintosh that are cause for user-celebration. One product foremost among these offerings is a resource driver called SmoothTalker, a software-based speech synthesizer that is truly exciting to use and affords high quality output via either the Mac's internal speaker or through connection to external speakers and/or stereo system. The program can verbalize any text document, be it a Multiplan spreadsheet, a MacWrite or Word text document, or text entered directly into the program itself, in either a male or female voice.

SmoothTalker features a single, copy-protected disk which is only required as a key or master disk when you first boot up the male or female voice; otherwise you can use a backup copy—and you can use it on your hard disk drive. Inside, six pages of Quick-Start instructions soon have your Mac up and talking. An additional 27 pages of documentation is disk-based and can be printed whenever you want a hard copy. This manual leads you through the more advanced aspects of speech synthesis as well as basic program operation. Single topic sections can be dumped individually to the printer, or the documentation can be read online when needed. The ability to print out the entire documentation via a single command is far superior to the single-page printer dumps required by the program's original version.

SmoothTalker performed admirably. A hyphen bug found in an earlier version has been totally eliminated in Version 2.0 and each word entered was enunciated well. The program converts English text into 41 building blocks of speech called phonemes. Over 1,200 English rules are then applied to the incoming text, and variables such as stress, pitch and inflection caused by punctuation are automatically encoded. You can vary the speed, pitch and volume of your SmoothTalking voice. A simpler-to-use speech synthesizer would be hard to find. All references needed for phonetic spellings or other speech control are covered in the documentation.

Enjoyment of SmoothTalker does not depend upon your understanding of phonetic coding and phonemes. The manual affords you an easy entrance into this environment should your interest become perked after using the program for a short while. A dictionary assists with not only the phonetic coding for specific words, but also enables you to code words not correctly pronounced by the program itself. The dictionary actually becomes SmoothTalker's instructor.

The most common abbreviations are already part of the program's intelligent speech capability, so "Dr" is pronounced "doctor" and "St" as "street." Male and female voice are both standard options, with volume, pitch, speed, tone and voice all user-configurable. If you type mathematical symbols such as + or 69 into SmoothTalker, it will read them back as "plus" and "pi." We uncovered two specific and invaluable uses for SmoothTalker. Our son, who is currently studying first year French, uses SmoothTalker to aid in both the pronunciation of, and learning of, individual French words. He constructs complete sentences in English, with SmoothTalker, then translates the words into their French equivalent, and vice-versa. This is managed via the program's dictionary, where he phonetically enters the French or English equivalent of the French or English word that is entered in the actual document. Through selection of specific passages, or the entire document, by painting the desired text with the mouse, he then listens to SmoothTalker pronounce the words in either the male or female voice. He repeats the passages aloud for both understanding of the word's meaning and its proper use in French sentence structure.

We write many articles every week. Sometimes we become lost in our own verbiage and must hear what has been written in order to detect errors, both in content meaning and sentence structure. SmoothTalker handles this assignment in a most pleasing fashion, reading back to us our review or feature article. Since we can halt the pronunciation of our document by simply clicking on-screen, changes can be

made immediately to our text even when the document is in the SmoothTalker program itself. After our listen/correct stages, we save our material to the data disk. The document is enhanced for hard copy printing (doublespacing, etc.) by porting the text to MacWrite or MS Word.

For those experienced programmers who would like to incorporate speech into their own MS BASIC or other language-based programs (e.g. C, Pascal, Assembly), the documentation offers programming assistance. Furthermore, First Byte's Technical Support department has put together a separate 150-page hard cover manual which gives examples in C, Pascal, Assembly and BASIC for serious hackers. Because SmoothTalker involves analog to digital conversion it only operates on the 128K and 512K Macintosh, not on the Mac XL.

First Byte certainly manages to set an example for other software vendors in that they have a toll-free number for both dealer and end-user calls. The software is warranted for 180 days from the purchase date. SmoothTalker is perfect for novice and advanced user alike. The program is perfectly suited for self-running demonstrations, educational needs and for proofing business correspondence or financial worksheets. SmoothTalker's diction is as precise as any micro synthesizer on the market today, and performs exceptionally well. The product's ease of use in conjunction with its superior programming technology could well leave you wondering how you managed to ever get along without speech synthesis. We both feel that SmoothTalker should be an inclusion in your Macintosh product library, whether for business use or personal enjoyment.

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85

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</div

Orphan Support



Will All Orphan Supporters Please Stand Up?

I think that it is time for us to find out just how many sources of support really exist for us orphans. I know there are several Lisa/XL groups that are part of a larger Macintosh or Apple group, but I know of only one that started with Lisa and has not switched over to a primary focus on Macintosh. I know of two organizations that offer services for a price, one that manufactures hardware products, and one that has a substantial software package just for the XL. However, I suspect that there are others of which I am unaware, and I know that a lot of users would like to know what resources are available.

I would like to compile a directory of those organizations wishing to be known to the Lisa/XL user community. Any user groups or companies which offer commercial products or services in the United States or abroad who wish to be listed should send me the information by April 5. Wherever you are and whatever you do, if you have something to offer a Lisa/XL user, tell me about it and I will see that your organization is listed in the first-ever Lisa/XL Orphan Supporters Directory.

Include the following information about your organization:

- Name of organization
- Primary activities and/or purpose
- Products and/or publications distributed
- Address and phone number
- Name of person who can be contacted
- Subscription rates for publications
- a short description of products

Include any other pertinent information. If anybody wants to get his or her information to me through CompuServe via EasyPlex, my user number is 70167,613. I would advise you to not go through the MAUG, since messages come and go so quickly (even in category 9 for the Lisa). Below I have listed a few organizations that I know about.

User Groups

Association Of Apple 32 Users
P.O. Box 634
Santa Clara, CA 95052
(408) 988-5594
Mid Fuller—Lisa SIG
(415) 940-2460

Peninsula Area Lisa User Group (PLUG)
Joan Dickey
P.O. Box 133
170 Arbor Lane
Moss Beach, CA 94308
(415) 728-5462

Washington Apple Pi
8227 Woodmont Ave. Suite 201
Bethesda, MD 20814
(301) 654-8060
Gordon Stubbs—Lisa SIG
(703) 750-0224

X/Lisa Users Group
P.O. Box 450676
Miami, FL 33145
Van Martin
On A BBS (305) 445-6481

Companies

AST Research, Inc.
2121 Alton Ave.
Irvine, CA 92714
(714) 863-1333
Ash Jain
Lisa/XL Hardware Products

InfoSphere
4730 SW Macadam Ave
Portland, OR 97201
(503) 226-3620
XL Software

The Networkers
3500 Market St. Suite 103
San Francisco, CA 94131
(415) 550-1710
Lewis Guice
The LisaTalk Report
(A quarterly Publication)

What Kind Of Support Is This?

Those of you who received the Dear John letter from Apple last summer will remember the promise of "support for the next 5 years." While the letter was not very precise about just what support entailed (beyond an inventory of spare parts), even the most pessimistic interpretation would not explain the experience of Will Anderson from Rio Grande City, Texas. His XL was failing intermittently and would not even start into the hardware test cycle. The owner's manual says that this may indicate a CPU failure and that the owner should take it to the dealer for testing.

Will writes, "I contacted my dealer (COMPACO . . . alias SIMTEC . . . alias Computer Galleries of Houston) and was informed that the new owners will have nothing to do with the Lisa system anymore! The manager told me, in effect, to go fly a kite. That is most distressing, since I purchased my system when it was selling for \$8,000 in the fall of 1983. Now I have a real 'orphan' that has been totally rejected by the dealer I bought it from."

Lewis Guice of The Networkers is familiar with a number of similar cases of rejection by Apple dealers. If the problems were primarily concerned with software, I would have some sympathy with the dealers, but many of these are hardware problems. Every dealer who sells Apple computers must be able to service the equipment, although they obviously do not have to be willing.

I called my local Apple sales office to see what advice they would give to a user encountering this kind of treatment. Their recommendation was to inform the regional sales manager for Apple and see what course of action he or she advises. If you cannot locate the nearest Apple sales office, call Apple Computer at (408) 996-1010 and ask to be connected to someone who can supply the information.

XL Compatible Software List Begins

Most XL owners are keenly aware that not all Macintosh software will execute properly on an XL. Some programs behave strangely; some have only minor difficulties; some do not work at all. I have seen a couple of attempts to compile a reliable list of non-XL programs, but the efforts do not seem to continue for long. I would like to try once more and I will look to you, the users, to send me the results of your experiences. I want to hear about the software that does not work at all, that which has some problems, and even those which have no problems. Very few programs are labeled with respect to the XL, and just because it does not appear on the black list you cannot be sure that it will work.

THE KEEPER.TM

THE FIRST SMART FILE SERVER FOR THE MACINTOSHTM OFFICE.

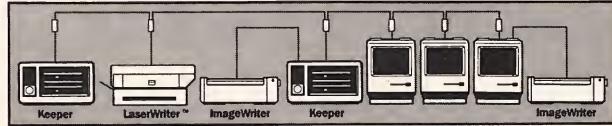
First—And Only.

The Keeper is the only shared storage device that uses the built-in intelligence and power of an internal microcomputer. There's no need to tap the strength of the network by "dedicating" a Macintosh to run the Keeper. It's the easiest, most cost-effective way to store and share information on the AppleTalk™ network.

There's Room for Everybody.

As the network grows, multiple Keepers can be added for more storage, with each providing up to 64 dynamically sized disk volumes which can be shared by every user simultaneously. Because disk volumes expand and contract automatically when files are added or deleted, there's no need for complicated calculations to "partition" the disk. And with removable hard disk cartridges, storage is virtually unlimited. The Keeper is

available in 10, 20 or 30 megabyte capacities, as well as in combination with a 5 megabyte cartridge drive.



Typical network setup using two Keepers

Brains and Brawn.

The powerful Keeper file server is all you need to vastly enhance a variety of essential functions: It acts as a print server and spooler for the ImageWriter™ and Macintosh network. It offers versatile back-up capabilities and security options. It operates as a stand-alone hard disk for a single Macintosh. And it does it all while maintaining the simplicity of the Macintosh itself.

Now that's smart.



800-531-5002/In Texas, call 512-441-7890

See the Keeper at the San Francisco MACWORLD Exposition, Booths 232 and 234.

Contact your local computer dealer or Micro-Design for more information.

In Canada, call McKenzie-Brown Canada, Inc. at 800-387-9016.

The Keeper and The Keep are trademarks of Micro-Design. Apple is a registered trademark, and ImageWriter, LaserWriter and AppleTalk are trademarks of Apple Computer, Inc. Macintosh is a trademark licensed to Apple Computer, Inc.

Circle 89 on Reader Service Information card

MAC XL / LISA POWERRRR

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512K List \$895... \$ 695
1.5 MB List \$2095..\$1095*
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Circle 24 on Reader Service Information card

XL Software Compatibility Installment #1 - As Of December 1985

Product Name	XL Problems	Confid.	Comments
All Apple Appl.	None	99%	Some will not use extra screen
ThinkTank 512	One	99%	Problems running with XL Serve (Should get solved)
FONTastic	None	99%	Will use entire XL Screen
Accessories Pak #1	One	99%	Cursor behaves strangely with the Rulers Desk Accessory
ClickArt Effects	None	99%	Good DA for MacPaint
All programs requiring Mac sound hardware	Won't Run	99%	XL does not have Mac equivalent hardware
Mac Zap	Some	99%	Mac Zap Patcher will not run
Thunderscan	Won't Run	100%	I have not heard if this will be fixed in the future.

Figure 1. Installment 1 of the XL Software List

Figure 1 has my first installment, and I will issue new installments as I get more information. I will try to keep the format of this figure the same from month to month, so you can cut it out and put it in a notebook.

Caution! I do not intend to buy the programs you tell me about in order to check and make sure that your testimony is correct. Please test carefully and report the results accurately. I am perfectly willing to accept a confidence factor from you. If you tell me that you are only 90% sure of the problem, I will pass it along. I am a firm

believer that someone's 90% or 80% confidence is better than my 0% knowledge.

The Migration Package—At Last A Reality!

From Gary Kato on CompuServe I have learned that the Lisa-To-Macintosh Migration Package was released by Apple on November 30th. (Please see my November column for some introductory remarks about this product). I hope to be able to get it reviewed in time to make the April issue.

You can buy the migration software alone for \$30, or as part of the Lotus or Excel package for \$450. The Lotus package consists of Jazz, while the Excel package also includes Word, File, and MacTerminal. For reasons I do not quite understand, the offer is valid only until May 31, 1986. At least I should have a review for you before the deal is off.

Has Anybody Out There Made The Switch?

I wouldn't have believed it, but no one has contacted me with their experiences using the Apple Screen Modification Kit. Surely some of you who purchased the XL only for Macied me with their experiences using the Apple Screen Modification Kit. Surely some of you who purchased the XL only for Macintosh have made the modification. Let me know how it is working and especially let me know how much of the software takes advantage of the reformatted screen.

If there is anyone who has installed one of the screen switches (LisaVision or Bit-Fixer) and then has installed Apple's modification, please let me know how it has worked for you. If the rumor that the next Mac still does not have a bigger screen is true, there could be quite a number of customers for the Screen Modification Kit.

—Dave Redhed

Dave Redhed and Lisa are Contributing Editors who reside in Seattle. You can reach them c/o The MACazine or on CompuServe 70167,613.

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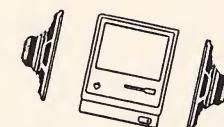
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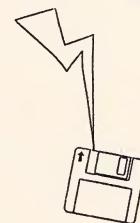
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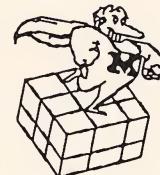
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Integration on a One-Disk Budget

The buzzword in Macintoshland these days seems to be *integration*. Most of the press is going to the big, bulky, business integrated packages: Jazz, Excel, Quartet. They are getting the reviews and the news.

There is a problem here, and that is cost and size. Both Jazz and Excel are huge packages designed for use on the 512K (and bigger) Mac with an external drive. Quartet works on a 128K Mac, but seems all but useless for most applications.

And how many of the "Rest of Us" need Jazz? I'd say damn few. So what I'm going to talk about is creating a package which works on a one-disk budget.

How do you maximize your applications one disk? With desk accessories—the real power of the Macintosh System. You can pick and choose from some really outrageous programs written as desk accessories.

The Package

I started out with a System, Finder, ImageWriter driver and MacDraw. Why MacDraw? Simple. MacDraw is one of the most powerful and flexible programs available for the Mac. It can create beautifully structured graphics, logos, letterheads, technical drawings and elementary CADs. It can also be used for elementary page makeup a la PageMaker. The built-in text editor in Draw is more powerful and flexible than the one found in MacPublisher. You can set up columns and draw your special graphics right there. Beautiful. And the program functions nicely with the LaserWriter. Note that the package I put together is not optimized for LaserPrinting, but then again, most people don't and won't own a LaserWriter.

The fonts I chose were ImageWriter fonts, and relatively few of those. Space limitations on the 400K disk demanded few fonts, but I chose the important ones: Geneva and New York. For special purposes, I also placed Cairo and Taliesin in the System.

The Integration

I firmly believe that with DAs you can do better than with mega programs. Perhaps my "integrated" software is not for the Fortune 500, but it sure is perfect for small business or home use. And 'way cheaper.

Here is a list of Desk Accessories in my "Home Integration Low Budget System" (HILoBS):

1) *12c Calculator*: 4986 bytes. The 12c calculator is a powerful calculation tool that looks and acts pretty much like the Hewlett Packard 12c. I have even read that the company that makes the DA is also offering HP-like programs to run with the 12c DA. It is more than adequate for your personal and business calculating chores.

2) *Alarm Clock*: 4067 bytes. This is the standard Apple clock that comes with your Macintosh System. It's pretty good all the way around.

3) *Art Grabber*: 3682 bytes. Art Grabber is from MacroMind, who created VideoWorks and MusicWorks. It costs \$19.95 and comes with *Body Shop* which is an awesome collection of click art allowing you to build people. Art Grabber allows you to directly open and grab a MacPaint image up to the size of the Macintosh screen and paste it into whatever application the DA is sitting on. In my case, MacDraw. I generally use it with MacWrite and MacPaint, and it probably has saved me eighty years of disk swap time moving between applications.

4) *Choose Printer*: 5649 bytes. This is the DA that is installed when you use the System Update application from Apple. It allows you to choose between printers that you have installed on your system. It really isn't very useful here, but I included it in deference to Apple and Finder 4.1.

5) *ClickOn Worksheet*: 34730 bytes. Mac'n'Talk chose this as Business Application of 1985. It is well worth the \$115. Although it is the largest DA in my list, its performance and functions are truly awesome. It is an adequately powerful spreadsheet with

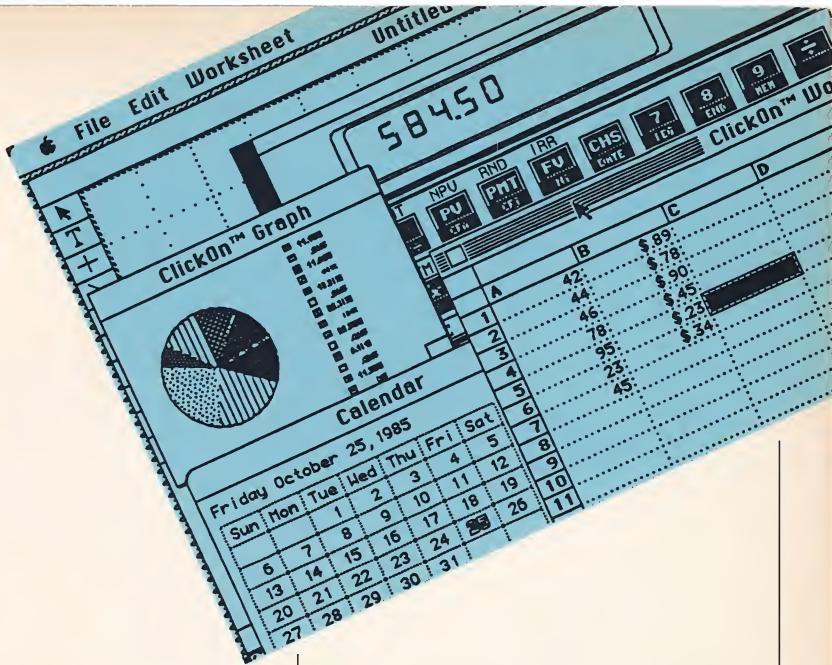
graphs to boot. Who needs Jazz? ClickOn proves that smaller is sometimes better. Quality before quantity.

6) *Day Calendar*: 21939 bytes. This is a little application that allows you to keep track of your daily appointments. When you pull it out of the menu a calendar of the present month appears with the present day highlighted. You can choose any day and any month. The program gives you space to write in notes and appointments at the bottom of the open window. A very useful Public Domain application.

7) *Mockterminal*: 7971 bytes. This, along with MockWrite, is from CE software, both of which are distributed as freeware. That means that you get the program free, but if you choose to use it, you are expected to send \$25 for Term and write together. A great deal. This communications DA is probably as powerful as the communications package that comes with Jazz.

8) *MockWrite*: 6101 bytes. MockWrite is a powerful text editor that allows you to write, save, recall, edit and print written documents. The saved files can be opened by MacWrite or Word if you need to really pretty them up. There's only one font type, style and size, but it's ideal for rough drafts and notes. You can use the standard Macintosh Cut and Paste routines to put MockWrite stuff into other applications.

Total Desk Accessory space: 89025 bytes or 89K. Wow! This gives you almost all that Jazz or Excel can do, and it's still under 100K. Of course, you can pick and choose as you like to build your own package to suit your needs. For example, some people may want the Disk Info DA, or may not need a text editor, or not as powerful a one, so you could use the Apple NotePad instead of MockWrite. Some people may not need the power of the 12c calculator, so you could use one of the seven or so calculators available in Public Domain.





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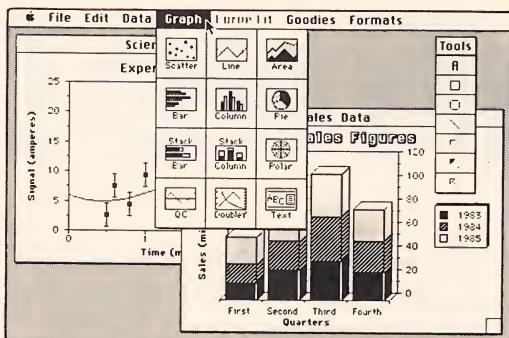
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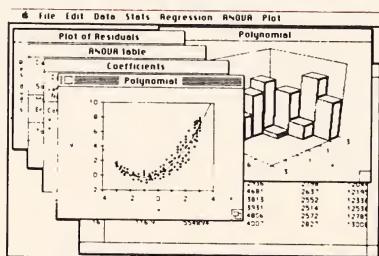


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The one thing my package lacks that other integrated packages have is a database. If you need a database, you could include one in your integrated software package. The watchword when crafting an integrated DA package is *your needs*. Build your package around the full blown application which you consider most vital.

Jazz costs \$843 Canadian and Excel costs \$575 Canadian. To integrate Excel, you need Word and File with the Switcher which brings the Excel package to approximately \$1143 Canadian. That's the real competition. The price for my integrated package is: \$280 MacDraw; \$115 ClickOn Worksheet; \$35 Art Grabber with Body Shop; \$40 MockTerminal/MockWrite; the remainder are all Public Domain. My package costs \$470 Canadian.

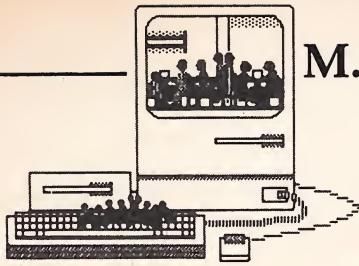
For most of us, the cost of Jazz or Excel is too high. Four hundred seventy dollars may be too high for some of you, but think a moment. Replace MacDraw with MacPaint. Now your package is only the price of ClickOn, Art Grabber and the CE software. Integration can be cheap. Remember that the Macintosh is the most flexible personal computer in the world. It can do damn near anything you need it to do, and it can do it faster, cheaper and better than all but the highest technical systems. Make it what you need.

If you can't get the Public Domain DAs from your local MUG, Mac'n'Talk has copies of all of them. Contact us at P.O. Box 7075-D, Victoria, B.C. V9B 4Z2, Canada.

—J. Michael Dlugos

Michael Dlugos is Editor of the Victoria, B.C. MUG's Mac'n'Talk.

This article was edited and excerpted from Volume 2 Number 5 of the Victoria Macintosh User's Group newsletter Mac'n'Talk with Michael Dlugos' permission. Mac'n'Talk chose four products in their First Annual Golden Diskette Award for 1985. Program of the Year: PageMaker by Aldus Corporation; Business Application of the Year: Click-On Worksheet by T/Maker Graphics; Educational/Entertainment Program of the Year: Chip Wits by BrainPower, Inc.; and Hardware of the Year: the LaserWriter from Apple Computer.



M.U.G. Shots

It seems Apple was listening. The user group meeting that I wrote about a few columns ago has generated something that could be very significant for MUGs. Apple now has a fulltime User Group Evangelist—Ellen Petry Leanne.

Ellen is not new to Apple nor user groups. She worked in international sales and product management for several years before becoming a member of the Consumer Group. Interestingly enough, user groups seem to play a more important role in the European market than they do in here. As a result, Ellen is already familiar with ways in which interaction between Apple and user groups might be enhanced.

Ellen has plans that are remarkably consistent with the recommendations that the user group representatives presented to Apple. First, she wants to increase cooperation among dealers and user groups. Apparently, it is in this area that European user groups have an advantage over our own. European dealers understand the important after-sales education role that user groups play. The fact is that most user groups describe their main function as education. Despite the Mac's easy to use interface, people still have trouble learning all of the amazing things that can be done on the Mac, and user groups offer education and after-sale support at a price that dealers cannot possibly match. Yet, in the States, dealers do not seem to understand the importance of the services that MUGs supply. As a result, they often act as if MUGs do not exist. Ellen wants to change all of this.

Several possibilities for increased interaction exist. For example, some groups already have arrangements with dealers whereby a dealer receives a free full page ad in the group's newsletter in exchange for using some of the dealer's equipment (a projector or a large screen or several demo Mac's) at meetings. Dealers might use a group's newsletter to offer group members discounts on special products. Any person who brings the dealer a coupon published in the MUG's newsletter could be entitled to the discount. This would have the benefit of increasing both newsletter subscriptions and dealer walk-ins. Dealers and MUGs might join together to promote special Macintosh training seminars put on by the group. Most groups have one or two people who are really expert in some aspect of the Mac, so special seminars could be offered on specific solution-oriented topics (e.g.,

using Excel in sales management, forms preparation with FileMaker, etc.) and the dealer could offer discounts on the relevant software at the seminar. Dealers and groups might share the cost of advertising special group meetings.

Communications between MUGs and dealers is not the only problem that Ellen is working on. She hopes to improve communication channels to Apple. When I last spoke with her, she said that both traditional mail and electronic systems are being explored. In fact, by the time this article appears, Apple may have an electronic mail system setup for communication between Apple and user groups, probably based on Apple-Link.

The latter is a most exciting possibility. Such a system would solve many of the problems that I have ranted and raved about so often in this column. User groups could upload their best newsletter stuff (maybe even entire newsletters already in PageMaker or MacPublisher format). The latest tips, news, etc. could then be available to even the smallest groups. If the system worked well, Apple people might even contribute, or at least comment on the newsletter material. Questions and problems raised at group meetings for which no one knew a solution could be uploaded for comment by Apple. Sounds too good to be true. But regardless of the details, Ellen is committed to developing more formal and consistent channels of communication with user groups.

If you think this is good, you ain't heard noth'n yet. Apple is looking into the possibility of offering special, single item, purchases at substantial discounts to user groups. It isn't clear what shape this will take, and what items will be offered (if any), but in my dream world, I know what I would like to see. How about making the latest hardware available to groups so they can demo it for Apple? Something like this could be coordinated with Apple's product announcements. (Imagine the media hype that would surround a worldwide introduction of the latest hardware at over 175 MUGs around the world.) How about making certain types of equipment that improve a group's operation (modems, Macs with video ports, hard disks to speed up demos at group meetings, projectors—even used ones) available?

Another project that Ellen hopes to spearhead is the establishment of a speaker's bureau. The bureau will consist of some sixty or more individuals, mostly

within Apple. According to Ellen some of the speakers will be high placed in Apple. The scheduling and availability details have not been worked out, yet. Nevertheless, whatever form this takes, it should especially help the smaller group get access to the latest information about the goings-on at Apple.

I am sending Ellen my list of user group addresses but just in case, I recommend that all user groups write to Ellen with your latest address, phone numbers, group leaders, etc. Send it to: Ms. Ellen Petry Leanne, Apple Computer, Inc., 2025 Mariani Ave., MS 23G, Cupertino, CA 95014

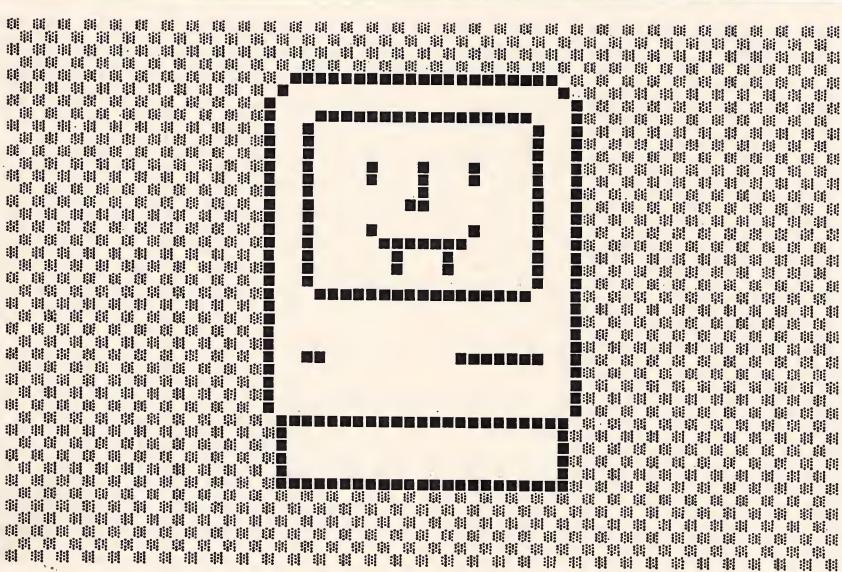
Whether the user group evangelist concept stays with us depends as much on how user groups respond to this opportunity as it does on Apple's corporate decision makers. As I have said before, MUGs must show Apple their strength in terms of buying power, opinion leadership, and word of mouth advertising if they expect Apple to provide continued support. A few hundred or even a few thousand users in one MUG speaking in an isolated voice is going to carry much weight. Timely and organized information exchange is essential. If Ellen's plans to provide groups with access to Apple-Link or something similar are successful, information exchange should be a given.

New National MUG

Terry Girardot, the founder of the Mac Pack—A Friendly Users' Group, located in Richardson Texas has expanded his plans to develop a coalition of user groups in Texas to include all MUGs. The coalition is called F.Y.I. and its primary goal seems to be to provide timely information exchange among the MUGs. Each group pays a yearly fee \$75 to be a member of the coalition. Every month they send F.Y.I. their newsletter on disk plus any other news, questions, etc. F.Y.I. then extracts the best material from all of the newsletters they receive and mails back to all of the groups a disk filled with the "best of" material. Blank space on the disk would be filled with public domain software. F.Y.I. will also make PD disks available to members at \$7.50 per disk. Although I haven't seen a detailed list, they seem to have a good selection.

This is very similar to an idea that I was pushing in a previous column. My solution was to take advantage of CompuServe to keep the information as timely as possible. However, the cost of uploading and

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downloading can get high when telephone and CompuServe charges are combined. Terry's idea will be cheaper in the long run, but not as timely. If Ellen comes through with Apple-Link, this may prove the ideal solution.

New Magazine

Taylor Barcroft, a leader of one of the earlier Mac groups in the US has started a new magazine called MacBriefs (PO Box 2178, Huntington Beach, CA 92647). Two things are of interest about this magazine. First, the purpose of the magazine is to cite and summarize Macintosh relevant articles from a large number of publications. This offers the reader a chance to see, at a glance, what several people thought about a particular product or idea. MUGs might want to take advantage of this kind of information when they do their own reviews of products. I have argued that MUGs need to combine their opinions. There is power in numbers.

Second, the entire magazine was produced on the Macintosh, drafted with the LaserWriter (imagine using the LaserWriter for draft print), and then printed on the Linotronic 100P at a much higher dots per inch than the LaserWriter. This process is made possible by the fact that both the LaserWriter and the Linotronic 100P print documents in response to PostScript commands.

More MUG news

A few of the MUG newsletters have been publishing listings of the latest version numbers for most of more popular programs. A great idea.

I have seen many reports that the plastic sleeves in which new disks are packaged can build up quite a charge of static electricity. Just in case this is correct, you may not wish to store your disks with data on them in the sleeves.

La Mac, in Los Angles, along with PMUG in Portland, Mouse Droppings in Corvallis, MacFUG in Salt Lake, MacNexus in Sacramento, and Macintalk in Victoria have started an ad consortium. Advertisers interested in reaching larger audiences than just the members of a local MUG, call *La Mac*. The ad is placed in each of the member newsletters at whatever price each MUG normally charges for their ads. *La Mac* takes 10% of the MUG fee for the service. Those interested in more information can call *La Mac* at (213) 462-2860.

The December issue of Stanford's MUG contain an excellent article by Chuck Walker on using REdit (the European ResEdit) to customize the MiniFinder window.

James C. Weinrich, Ph.D. wrote an article that appeared in the October issue of The Active Window, the Boston Computer Society's Mac newsletter, on problems that he has found with Microsoft Word and

how to overcome them. A few of the problems that he spoke about were: How do you search for a "?" when this is used as a command in the search instructions, how do you control the type face of text in the glossary, how can you avoid the "session too long" messages, and what do you do about desk accessories?

For those of you in education, Tom Holloway, wrote an informative article on how to use Microsoft File to keep and organize student records and grades on the Mac. The system automatically computes the student's final score from quiz grades. The article appeared in the November issue of MUGGER's MONTHLY, the newsletter of MUGWUMP.

More MUGs

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Fred Shoker, Editor (703) 433-8402

THE REST OF US—The Chicago Area
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—Ebbe B. Ebbesen

Ebbe Ebbesen is our MUG Shots Editor as well as Review Editor of the San Diego MUG. Contact him via CompuServe 74176,126. Requests for MUG and BBS information may be sent with an SASE and \$5 for postage and handling to Ebbe at 13267 Silver Saddle Lane, Poway, CA 92064.



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MAC Cetera

Calling All Cartoonists

From April 11-13, 1986, the Big Brothers and Big Sisters of Victoria, British Columbia are sponsoring *The Victoria International Cartoon Festival*, a festival devoted to cartooning, comic strips, comic books and almost any kind of graphic artistry. There are two sections with three categories. Section One is for *Published Cartoonists* and Section Two is for *Amateur Cartoonists*. The three categories are: Cartoon, Commercial Illustration, Animated or Semi-Animated Sequence. Entries must fall in one of the sections and one category.

Prizes include: two Grand Prizes of \$250 each, First Runner Up in each category for \$100, Second Runner Up in each category for \$50. All prizes are in Canadian dollars.

There will be a *Computer Cartooning Contest* for people who use computers to generate cartoons and short animated sequences. The Victoria Macintosh User Group is helping to promote this competition which will be one of the many highlights of the weekend.

Entries may be submitted as paper hard-copy output, Macintosh disk (using MacPaint, MacDraw, VideoWorks, ColorChart, Microsoft Chart, PageMaker, MacPublisher, Thunderscan), IBM format with any G.E.M. application, or video tape output in cassette format (less than 5 minutes long). Include your name, address, phone number, category entered and details of how you created your cartoon/animated sequence. All entries become the property of Big Brothers and Sisters of Victoria and may be published by them for fund-raising purposes.

For more information and to submit entries, contact Victoria International Cartoon Festival, 1551 Pandora Ave., Victoria, B.C., Canada V8R 6P9, tel. 604-592-3243; or contact J. Michael Dlugos, SoftA Code-Works, Inc. 2004 Fernwood Ave., Victoria, B.C. Canada V8T 2Y9, tel. 604-381-5667. The entry fee is \$5 Canadian, payable to the Victoria International Cartoon Festival (you may send an International Money Order).

Dartmouth in the News

As a result of leading the AUC schools in developing courseware for the Macintosh, Apple Computer, Inc. has awarded a matching grant of \$82,500 worth of computer equipment to Dartmouth College faculty. The equipment is comprised of 45

new Fat Macs, and 65 upgrade kits for 128K Macs. Dartmouth College will match Apple's grant with an equal number of new computers and upgrade kits purchased between July 1985 and June 1986. Dartmouth has been at the forefront of designing and sharing with other schools innovative teaching software in fields ranging from musical composition to syllogisms in philosophy. Faculty will be able to borrow the new equipment for teaching and curriculum development, enabling Dartmouth to continue the successful integration of computers on campus.

• RECEIVED FROM APPLE—In Cupertino, December, 1985, The Declaration of Interdependence.

"When, in the Course of Product Development, a Computer Manufacturer recognizes the bonds (and stocks) which tie it to its Third-Party Developers, it becomes necessary to Declare our Interdependence.

"Therefore We, the People of Apple Software Project Management, do hereby acknowledge our mutual commitments as follows: to call upon Divine Providence to help us find the worst Bugs before Shipping; to approach Shipping Schedules with Head held high and Feet planted firmly in Quicksand; to take up Arms against the Slings and Arrows of Outrageous Reviewers; to invoke the Spirit of Alexander Graham Bell in overcoming the Plague of Asynchronous Communications (aka "telephone tag"); to understand and accept Each Other's occasional Bozosity; to fill our Ledgers with Black Ink, satisfying the Wants of the Venture Capitalists and the Desire for Profit Sharing; and to stand as One against the Blue Meanies and other Forces of Tyranny.

"Now therefore we, the Apple Software Product Management Group, in partnership with you, the Apple Third-Party Development Community—in order to Form a more perfect Industry, Establish high-value Products for our Customers, Create outrageous Prosperity, Promote Harmony and Understanding, and Secure the Blessings of Success for You and all of your Products—do hereby ordain, establish, and commit to this Declaration of Our Interdependence.

"Scribed by our hands on this parchment (and backed up on disk, just in case)."

//The document bears the signatures of forty-eight members of the ASPMG//

Nice thoughts. If the ASPMG performs as well in the future as they have to date, "the rest of us" are in for an exciting year; still, we can't shake the intuition that some developers have been viewed as more valuably "interdependent" than others . . . no matter, the "Customer" is certainly well

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Price quoted for double sided disk at \$1.80 in January issue was a production error by The MACazine. Correct price is \$2.95 each.

served by Apple and its Developers . . . always has been . . . despite the occasional bug.

- **MacBUFFER**—Ergotron, P.O. Box 17013, Minneapolis, MN 55417 800/328-9839 or 612/854-9116 has announced (exclusively to The MACazine at press time) their long awaited MacPrint Buffer, a real hardware printer buffer with dual inputs (to allow two Macs to share a single buffer) in a 256k configuration which is expandable up to a full 1Mb. The MacPrint Buffer is, we understand, user transparent, "fully compatible with all current Mac software" (and the Imagewriter II) and includes all necessary connecting cables at a suggested retail of "under" \$300. Users familiar with the high quality of the Ergotron product line, notably MacTilt, should expect the MacPrint Buffer to be a real hardware gem . . . no question of its utility in the Mac Office or Mac Home environment.

- **FORTH STANDARD**—The FORTH Interest Group (FIG) has recently announced the publication of FORTH 83 Standard, the latest (and probably not the FOURTH) FORTH standard; the only standard endorsed by the FORTH Standards Team (who else!). It's available directly from the FIG at P.O. Box 8231, San Jose, CA 95155 408/277-0668 for \$15.

- **LISA?MAC XL TASK FORCE**—Mr. Lewis Guice of The Networkers and The LisaTalk Report has announced the formation of The International Lisa/Mac XL Task Force, the formation of The International Lisa/Mac XL Task Force, the purpose of which is to coordinate support of the Lisa/XL between Apple and third party developers to insure that the computer retains its present viability.

In a meeting with Apple's John Sculley, Mr. Guice presented proposals on behalf of the Task Force requesting, among other things, that Apple immediately undertake the correction of present software and hardware bugs requiring immediate attention, and that a vehicle be created for the ongoing support of the system; the objec-

tive being the maintenance of the Lisa/XL as fully compatible with present Mac systems and future upgrades. According to Guice, Sculley and his staff "were enthusiastically responsive to . . . the suggestions, and the wheels began to turn immediately."

A copy of the full proposal may be obtained from The NetWorkers, 21 Canyon Road, San Anselmo, CA 94960 415/258-9152.

Companies already committed to the Task Force include All Star Computers, Apple Computer, AST Research, Inc., Dafax Corporation, Infosphere Corporation, The MACazine, Micro Systems Designs, Santa Cruz Operations, Sun Data, and Open Systems.

- **MODEMS AND CALL WAITING**—

Nothing is quite as frustrating as attempting modem communications on a line with "call waiting" . . . even Murphy's half-brother could predict that at the critical moment (any critical moment) the "call waiting" will be activated with a resultant loss of carrier and contact. In most areas, pre-fixing the number to be dialed with 1170 for pulse dialers or 70 for tone dial phones will deactivate the call waiting feature. Contact your local phone company for the numbers which work in your area, and the proper procedure for deactivation.

- **DISK ERASE**—If you believe that erasing confidential files on a disk destroys the material, think again. Erase Disk leaves the "erased" material vulnerable to recovery by MacTools, MacZap or similar utility programs. The best way to prevent unwanted recovery is to overwrite the entire disk with new material.

- **COMPETITION '86**—Apple Computer Clubs International has opened Competition '86, the third annual Apple Computer Club Merit Competition for student members and club advisers in the United States and Canada; categories include Community Service, BASIC Programming, Computers in the Curriculum, and Judges Choice. For more information on Competition '86 or on starting a campus computer club, contact: Apple Computer Clubs International, Attention 1986 Merit Competition, 217 Jackson Street, Lowell, MA 01853 800/343-1425.

- **MAC BATTERY/CLOCK**—It's 2 years since the first Macs reached the market. The Mac clock is powered by a battery with an estimated 2 year life span. You might want to change yours out now; Eveready #523-BP, Ray-O-Vac #RPX-21, Duracell #PX-21 and Panasonic #PX-21 are all compatible.

Viewing the Visitor from the Oort Cloud:

Comet Halley



If Joost Romeu's *Starlight Starbright* has excited you about the prospect of using your Mac to chart the sky or to follow comet Halley's path from the Oort Cloud at the outermost edge of our solar system to our neck of the universe, then you have some choices to make with respect to software.

Comet Halley (Version 2.2)

Comet Halley, a program published by the same folks at Great Wave Software who brought you ConcertWare, is the clear choice for the person whose sole interest is in following Halley. The entire program is dedicated to this comet. Other celestial bodies are represented in the program only to the extent that they relate to comet Halley.

The program will draw a sky chart showing the comet's position amongst the stars for any time in any time zone between August 1, 1985 and July 31, 1986, for 30°, 35°, or 40° latitude. A coordinate grid, constellation lines, and constellation names may be superimposed on the chart if desired (figure 1). The sky chart may also be displayed with black stars on a white sky which is the best option for printing the sky. Besides simply showing the comet on the sky chart, Comet Halley can automatically change the viewing date by +1 or -1 day at a time and to trace the comet's path across the sky.

Unique to this program are five windows of viewing information which can be called up. These various windows provide information on the sky coordinates (right ascension and declination) and the comet's distance from the earth, the rising and setting times of the moon (important for planning observations in moonless skies) as well as the moon's age, viewing tips for



The start-up screen for Great Wave's Comet Halley is a reproduction of a tapestry woven in 1066. The tapestry depicts the return of Halley's Comet during the Battle of Hastings which saw the defeat of King Harold at the hands of William the Conqueror.

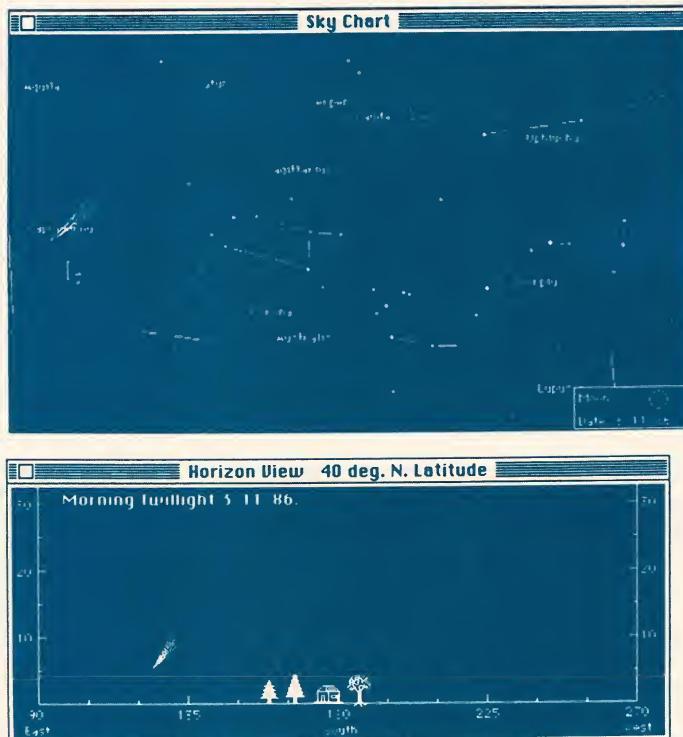


Figure 1. Two windows from the program, Comet Halley.

sighting the comet on a particular day, viewing instrument suggestions for telescopes and binoculars as well as information on the possibility of sighting the comet with the naked eye, and information on possible horizon viewing of the comet for certain dates.

This fascinating and educational program is well designed and simple to use. Although the program becomes obsolete after July 31, 1986, there is ample opportunity left to view the comet, and the \$29.95 price is set reasonably low. There will be great viewing opportunities in March and

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Figure 2. Halley's Comet shown on the southeastern horizon by MacStronomy.

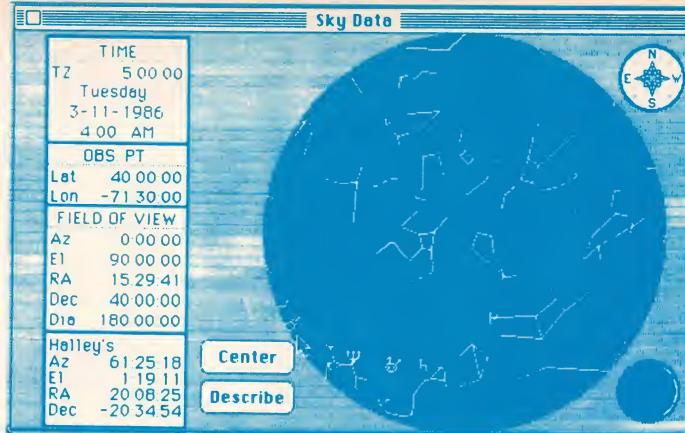
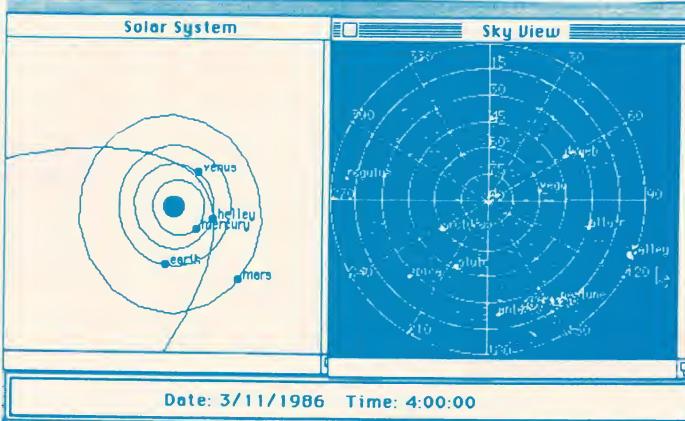


Figure 3. Solar system and sky view windows of the program Astronomy.



April. The last expected date on which the comet will be visible with a telescope is on June 29, 1986 after which it will be too close in the sky to the sun to be seen.

Halley's Comet is such a fascinating little program that it will likely leave the user wishing that he or she could find out more about the heavens and view a sky chart for any date. Two programs that offer a more general approach to astronomy but which also show the comet are Astronomy (\$35 from E & M Software) and MacStronomy (\$75 from Elton Software).

MacStronomy (Version 1.1)

MacStronomy lacks the various viewing tips of the Comet Halley program, but it does unmistakeably show Halley's location along with some 600 celestial objects including the sun, moon, all nine planets, and the 110 Messier objects. The program also makes it possible for the user to add another 2400 heavenly bodies to the data base.

Two viewing windows are available: the sky window (figure 2) which shows the selected portion of the sky and the planet window which shows the disposition of the planets and Halley's comet around the sun. Both windows provide zoom features. In the best Macintosh tradition one can click on any object in the sky and its coordinates (azimuth-elevation and right ascension-declination) are displayed. Two clicks of the mouse and the object's name is also displayed. A description of the object can also be called up.

This program makes it possible to display various sorts of sky maps including polar projections and overhead maps.

Date, time, location, and field of view are all under user control. It is also possible to search the data base for known objects and to find them in the sky. Constellation lines can also be shown or not as desired. Even the pictures used to represent the planets can be redrawn if desired.

Though any date can be entered, MacStronomy does not compute the precession of the planets' orbits which is to say that it does not account for the fact that the planets' orbits themselves rotate around the earth. The coordinates for MacStronomy are most accurate for the years 1950 to 2050. While not accurate enough for precise calculations, they should be sufficient for locating planets and calculating their distances from each other.

I found MacStronomy to be a fine program and very educational. The manual is well written. A form is included for documenting problems and for sending suggestions for improvement. Elton Software is planning on including the precession of the earth's orbit (to increase the accuracy of the star view over thousands of years), a quick zoom feature in the sky window, the ability to track earth orbiting objects, and generally increased speed in a new release which will hopefully be available by the time you read this.

Astronomy (Version 2.8)

Astronomy is a general astronomy program similar to Tellstar and MacStronomy but with few features and a lower price. Figure 3 shows the two viewing windows. Both windows are resizable and have zoom capability. The zoom option will show the inner planets of the solar system

more clearly when used in the solar system window and will reveal star names when used in the sky view window. The grid lines cannot be turned off.

Only one sky view is available. The user can determine the date, time (Local Standard Time), and latitude and longitude. Approximately 300 stars are included in the data base as well as the nine planets of the solar system, the moon and Halley's comet. The user can add celestial objects to the data base. Information on individual stars other than their names is not directly available in the program. Information on star magnitude and the parameters used to calculate orbits of planets are available in text files that can be read with MacWrite.

The other features mentioned for the other programs are not currently available. The developer is considering a variety of enhancements including an increased star catalogue, Messier objects, a white sky for printing, and possibly others. As currently constituted, this program does not have as much appeal to the novice as either Comet Halley or MacStronomy.

Conclusion

The average shepherd who followed the fabled Bethlehem star 2,000 years ago knew much more about the sky than does the average American. While examining these programs the tremendous educational potential of such programs became immediately clear. It is one thing to learn about the heavens by reading a book and quite another to learn by manipulating the sky on the Mac's screen. This "year of the comet" is an excellent time to use your Mac to explore the universe.

TellStar not copy protected requires 512K
Level I \$49.95 Northern Hemisphere
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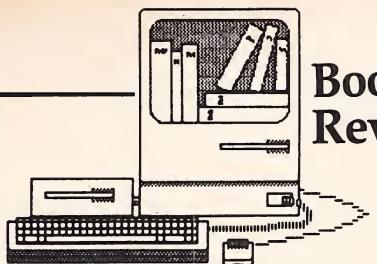
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—George Litterst



Book Review

MacGraphics for Business

You would expect a book titled *MacGraphics for Business* to be all about business graphs and pie charts. It's not. This book by Jerry Mar is more like a textbook on graphic design for business communication. It's designed like a textbook, and unfortunately, reads like one. However, the book has a lot of clearly presented information which will be useful to anyone who prepares graphic communication. *MacGraphics for Business* will be most helpful though, for the person who has always used his Mac as a glorified typewriter but now wants to start making some charts, graphs or diagrams.

Mar covers all aspects of business graphics in seven systematic chapters. He starts with the theory of graphic design and goes on to various examples of every conceivable way a person could use Macintosh-prepared graphics in business. The examples are created using three first-generation programs for the Macintosh—MacPaint, MacDraw and Microsoft Chart. (There's a little MBASIC thrown in at the end). You'll see examples here that range from simple posters and organization charts, to complex circuit board drafting and construction drawings. Not exactly a how-to-draw manual, the book nonetheless gives some good advice along with techniques and examples for people who aren't well trained in the art of MAD (Mouse Aided Design) drawing.

Some of the hypothetical situations Mar uses to set up the graphic solutions are sophomore. Some of the "rules" for graphic design and chart use are overly cautionary. That should be overlooked though, in order to get to some of the Truths and real world observations he makes. For example, the two questions you need to ask regarding a graphic solution:

1. "Can the problem be communicated adequately with words alone? (If it can, then graphics should not be used, since graphics take more time to generate than words.)"
 2. "Is there time to generate the type of graphics needed to communicate the intended message? (Obviously, if there is not, a graphics solution should not be attempted.)"
- And on the quality of Macintosh Graphics:

"If . . . compared to graphics created by professional artists, (they'll) be the second choice. On the other hand, compared to

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the graphics commonly generated by business professionals, Macintosh graphics are very good indeed. . . . The Macintosh eliminates the need for professional tools and enables the non-artist to quickly and easily generate high-quality graphics."

Only one chapter is devoted to business graphs (graphing numbers). It is one of the simplest and best descriptions of the terminology and uses of the various types of charts you'll find. Anywhere. These are mostly graphs derived from Microsoft

Chart but in some cases are modified by MacPaint or drawn from scratch in MacPaint. Particularly good is the illustration and accompanying construction hints for a three-dimensional 1-by-2 graph.

The final chapter of the book lists three Microsoft BASIC (2.0) programs. These programs, (written and copyrighted by the Author) will give you capabilities not possible in the readily-available programs. The first two are application programs. One draws perspective boxes, you supply

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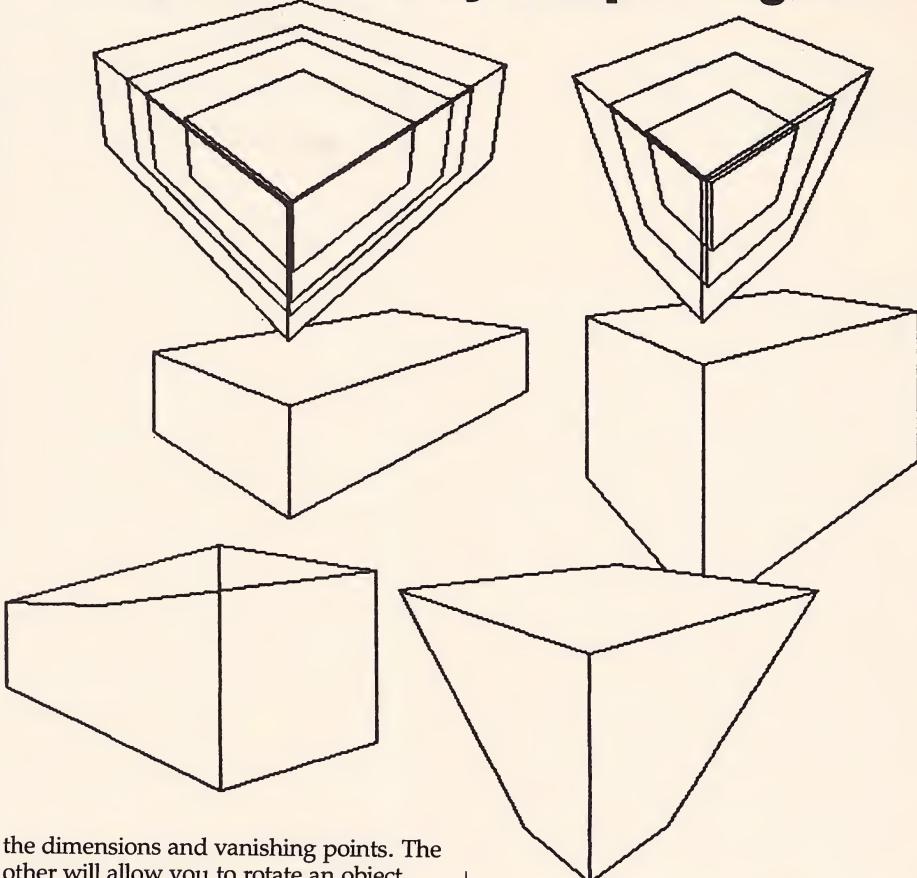


Figure 1. An almost unlimited variety of perspective boxes and planes can be drawn with the MBASIC Vanpt3 program. These can then be transferred to MacPaint for enhancement or as guides for drawing objects in correct two- or three-point perspective.

the dimensions and vanishing points. The other will allow you to rotate an object drawn in MacPaint by any number of degrees. (This, the author points out, is now more easily done with the Click Art Effects desk accessory in MacPaint). The last program is a coupled graphing routine. That is, a sort of subroutine which is intended to be included in a (MBASIC) numerical analysis program to make it draw graphs. This is serious stuff which will be very helpful to graphers who are limited by Microsoft Chart and the charting programs of Jazz and Excel. People who need to draw single variable functions on a semi-log plot, for example.

Finally, there are a couple of helpful appendices. One is a detailed description of how to use the clipboard and screen dump techniques to transfer parts of files between applications. The second is a brief example of how to draw cylinders in MacPaint. This could have been skipped or mentioned in passing in the graph section of the book. Last is a comparison of the Apple Laserwriter and the Imagewriter. Quality and dollars. Here you'll see how much better some of the book's illustrations look when printed on a laserwriter. You'll also get some ballpark financial analysis.

In the final analysis, *MacGraphics for Business* is a combination of theory and application which is probably too heavy on the theory. If you don't know how to use MacPaint, MacDraw and Chart, this book

won't teach you—although it might encourage you to learn. If you feel comfortable with the Macgraphic personality of your machine, and you need a little help with producing professional-quality graphics within the limitations of the Macintosh, this book will definitely help you.

MacGraphics for Business
by Jerry Mar
Scott, Foresman Company
1900 East Lake Avenue
Glenview, Illinois 60025
194 Pages, \$17.95

—David Clark

David Clark is Associate Publisher of Cyclist Magazine and systems director for its parent company, Cycle Guide Publications. He is our new Book Review Editor and can be reached c/o The MACazine or via Compuserve 72336,2453.

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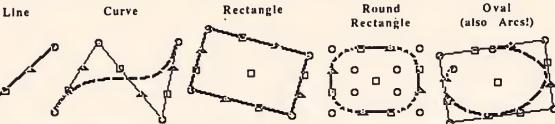
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Step 2: Enlarge, Reduce, Slide, and Tilt your drawing until the part you want is in the "Page" rectangle in the center of the 4paint screen. Then tell 4paint to make a MacPaint* document, and do more work on it in MacPaint* if you want. That's how all the lettering for this ad was done, and on a full page, too. 4paint requires 128K and one disk drive. You can't print directly from 4paint, but you can use MacPaint* to print MacPaint* documents made with 4paint.



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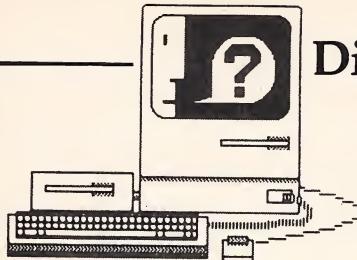
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Dialog Box

Fattening Your Mac

Q: I am the owner of a 128K Mac, and am interested in upgrading its memory. Apple recently lowered the price of the 512K upgrade to \$449. I have, however, seen 512K upgrades advertised for as little as \$169 and 1 megabyte upgrades for around \$500.

The price advantage of the off-brand upgrades is obvious, but what are the disadvantages?

- Are they program compatible with the Apple upgrade?
- If an upgraded processor board goes bad, what would Apple's policy be with respect to servicing the machine?
- What are the differences between the Apple upgrade and the different off-brands?
- Why is the Apple upgrade so much more expensive than the rest?

Some answers would be a big help to your 128K readers.

Paul Evans—Trumbull, CT

A: You've characterized the upgrade dilemma very well, Paul. You can save a great deal of money by using a third-party (e.g., non-Apple) memory upgrade. With a third-party upgrade, in fact, you can boost your Mac's memory to 2 megabytes or more. Not even a Macintosh XL can go that high. Nevertheless, there are some potential pitfalls to keep in mind. Let's take a look . . .

A 512K upgrade is the safest kind. The Macintosh analog board is designed to handle the extra memory's additional power load. Few digital circuit board modifications are required to accommodate the denser memory chips. You needn't modify the Macintosh ROM (Read-Only Memory) chips in order to use the extra memory. When properly installed, Macintosh programs cannot distinguish between an official Apple memory upgrade and a third-party upgrade.

When you add more than 512K, problems can appear. A standard 128K Macintosh digital circuit board can accommodate 512K bytes and no more. Thus, third-party upgrade manufacturers must devise add-on boards that contain additional memory and support chips. These add-on boards contribute extra heat and draw still more power. Heat accelerates the aging process inside the Mac. The additional power drawn by the add-on can cause a weak analog board to fail. Furthermore, the un-

modified Macintosh ROMs may not recognize the extra memory. This means that either the third-party vendor must either patch the Macintosh ROMs or restrict how you use the extra memory. This could mean, for example, that some or all of the extra memory could be used only as a RAM disk. Most of the large upgrades contain patches to the ROMs so that you can use all of the new memory normally. The dark side of this practice of patching is a lack of portability. In other words, when Apple provides new ROMs, you may have to obtain a new set of patches from your vendor (if that vendor still exists). This could require more Mac surgery. By the way, new ROM chips are likely to appear by summertime.

For all non-Apple upgrades, here is another tidbit to keep you awake nights: What happens if your third-party upgraded Macintosh fails? According to current policy, your Apple dealer is not required to repair your machine. For all the dealer knows, the cause of your problem may be the unauthorized modification. Your best course of action, in that case, may be to bring the errant Mac to the dealer who sold you the upgrade. In many cases, the dealer or vendor will extend a warranty to take the place of your forsaken Apple warranty. Ask your dealer before upgrading. Do-it-yourself upgrades will cause the most headaches if and when your Mac needs service.

Why is Apple's upgrade so much more expensive than the others'? There are several reasons. First of all, large companies like Apple tend to have more overhead (cost of buildings, equipment, benefits, salaries, marketing, etc.). Apple is optimized toward building and selling new machines, not servicing old ones. Instead of desoldering and modifying your old board, Apple simply replaces it with a new board. They may sell your old Macintosh digital board as scrap (poor thing!), after salvaging the few socketed reusable parts. For all you know, the 68000 processor chip in your friend's new 512K Macintosh used to be in someone else's 128K machine. After all, electrons don't wear out. Another expense: If your Mac contains a defective power supply, the Apple upgrade automatically includes a replacement analog board. Third-party upgrades

may not provide this degree of service.

What kind of upgrade should you get? If you are a novice computer user, a business user who cannot afford even the possibility of lost time, or you are wealthy, I'd recommend the Apple upgrade. If, on the other hand, you are an experienced computer hobbyist, you are willing to gamble some time for saved cash, or you are just on a very tight budget, perhaps you should try a bargain upgrade.

Of course, if you must have more than 512K bytes, you don't have much choice (unless the Apple stockholders' meeting revealed some new surprises). You will have to get your memory from a third-party vendor.

Me? I got a third-party 512K upgrade. I let the vendor install it. I'm too chicken to take a soldering iron to my favorite computer-buddy's vitals.

Goodie of the Month: Orion

I have been a space exploration enthusiast for nearly as long as I can remember (I drew Mercury capsules with my Crayolas). That's why I was so tickled when I discovered that the Mac application I had just downloaded from BIX was an interstellar spaceflight simulator. The application is called Orion version 1.0, a shareware program written by Robert Munro. Orion is a blast—literally. It is a simulation of a fusion-powered starship. Looking out of the cockpit, you see a sky sprinkled with an impressive collection of stars. The stars are not random—they are several dozen of our "near" neighbors, displayed in the appropriate positions and with appropriate apparent brightness. You start out in space, in the vicinity of our favorite solar system. The nine familiar planets orbit Sol at proportionately accurate rates. You can roll, pitch, or yaw your starship. You can accelerate, decelerate, or stop it. As you move at unheard-of speeds through the heavens, the stars shift past you and change in apparent brightness. They are actually displayed in their correct, three-dimensional positions. Thus, the constellations distort as you move away from our sun. If you approach a star closely, you can examine its planetary system (though it is always a carbon copy of our own). You can superimpose an astro-

nomical grid on the star field. You can also ask Orion to display the names of the brightest stars, or of the closest objects.

Robert wrote Orion in assembler. The program says it runs just fine on a 128K Mac. You can find Orion in BIX's listings conference, in the Macintosh area. Your local Macintosh bulletin board or user group library may also have it. If you must obtain it from the author (8 Manning Drive, Barrington, Rhode Island 02806) please include a diskette and a self-addressed, stamped mailer. Robert asks a \$15 registration fee if you decide to keep it. He promises to send the next major revision to registrants. That revision is supposed to include planetary details, gravitation, and hidden-surface object display.

What a find for us space cadets. Thank you Robert!

S—Russell L. Schnapp

Got questions about the Macintosh? Just send them to me. I'll do my best to give you a concise, useful answer. Or, if you've come across (or written) a really fine public domain or shareware program, let me know about it. Mail your questions and correspondence to: The Dialog Box, c/o Russ Schnapp, P.O.Box 261091, San Diego, CA 92126. You can also zap them to me electronically, through BIX or GEnie: RSCHNAPP, or Compuserve: 74736,2125. I will reply to electronic mail promptly. Russ wrote *Macintosh Graphics in Modula-2*, published by Prentice-Hall.



Stargazing from my Orion starship.

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Start Beat 1 + 0	4 Beats	Off	
REC MUTE	TRACK NAME	LOOP	MIDI
	1 bass	Loop	CZ-101
	2 chords	Loop	DX-7
REC	3 melody	Xpander	
	4 (empty)		
Track 3	LENGTH	BEAT	QUANTIZE
	16 Bars		Note On

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EGLev	
Scaling	99 E3 0
Curve	+1m -1m
Output Level	99 1 2 0
Freq	M Coar Fine Det f 1.0 00 0

Algorithm 16

4	5
2	3
1	

Operator 6 Envelope

99	75
50	25
0	0

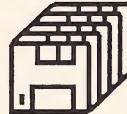
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GAMING ON THE MAC



Strategic Conquest

One of the more popular genres of computer games has been wargames. By their very nature wargames are probably the most difficult games to play with their complicated rules and usually large number of playing pieces to keep track of. It is not always easy to find an opponent who can play you a good game. This is where the computer comes in. A good computer wargame will take care of all the little details inherent to wargames, give you a challenge, and always be ready to take you on. Now, PBI Software has released the first strategy wargame for the Macintosh, *Strategic Conquest* written by Peter Merrill. The object of the game is global domination of an imaginary world against a computer controlled enemy force. To achieve this requires exploring the world, conquering cities where you can produce your forces, and ultimately forming your strategy to defeat the enemy. Doing this will not be easy as the computer opponent will probably give you all that you can handle.

Strategic Conquest has 15 levels of play, and while there is not a lot of difference in play between successive levels (I usually skip two or three after winning at a particular level), the difference between the lowest and highest is quite marked. Naturally, you should start out at level 1, but you should really have little difficulty winning. I am currently involved in a heated game at level 12, and while I have enjoyed a large positional advantage for quite a while, the computer is fiercely defending its territory that I am attempting to invade.

Game rounds are divided into days, with each side being able to move none, some, or all of its forces every day. A level 1 game will probably take somewhere between 100 and 150 days, while the game I mentioned above is currently about at day 250 and still going strong.

The game takes place on an imaginary world 60 by 100 sectors of oceans and continents dotted with cities (Fig. 1). At any one time the screen displays 22 by 30 sectors. Before you get the idea that after you have played a game you will know where everything is, keep in mind that a new

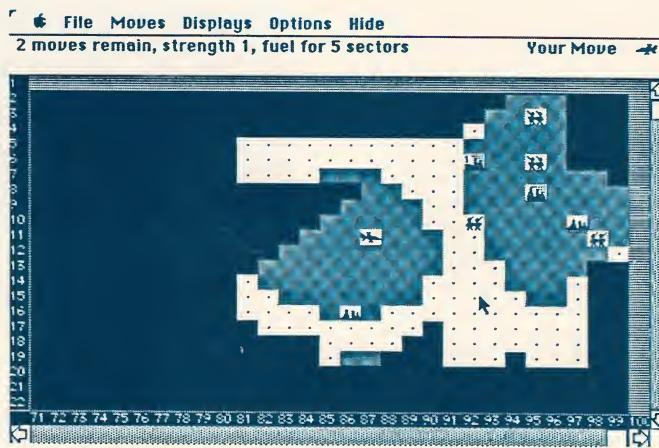


Figure 1. Early stage of Strategic Conquest with large unexplored area blacked out.

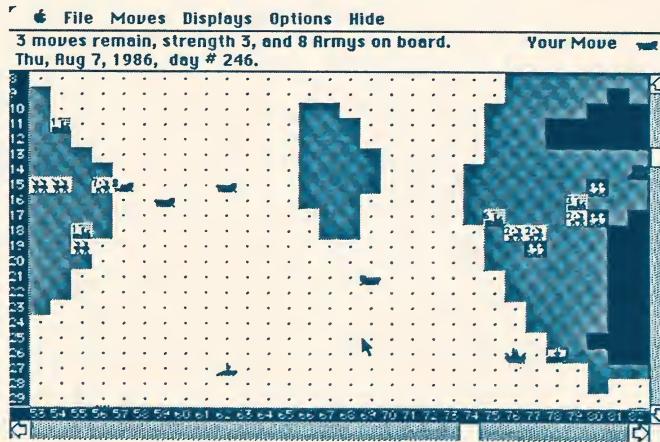


Figure 2. Invasion of enemy's continent on right with two of its cities already under my control. Enemy forces outlined in black.

world is generated for each new game and PBI states there are over 2 billion possible configurations. This should be enough to keep the game from getting too familiar for quite a while.

At the start of a new game you will be in control of one city and with the exception of that sector and the sectors immediately surrounding it, the rest of the world will be unexplored and unknown to you. This means you will have no idea where any other cities might be. Obviously your first priority in any game will be rapid exploration in order to discover new cities to conquer so as to produce more forces.

The forces you and the computer control are divided into three different types, as you would expect: (1) land: armies; (2) sea: destroyers, submarines, aircraft carriers, battleships, and troop transports; and (3) air: fighters and strategic bombers. Each city has the ability to produce one type of force at a time, although production may be changed at any time in order to begin producing new forces. Each different force has a particular strength (used to determine combat results), number of moves per day, and number of days for production.

Each force has its own characteristics which make it valuable in particular ways. A few examples are in order. Armies are the only force that are able to conquer cities and so will be the type you are primarily concerned with producing. Fighters have a greater number of moves per day than any other force and thus are useful for rapid exploration. Troop transports are extremely valuable in that they are the only mechanism you have for moving armies from continent to continent.

The most interesting force is the strategic bomber. As the game progresses it becomes more powerful with a subsequent increase in the number of days it takes to produce one. Also, unlike other forces, they can only be used once, being destroyed when they attack an enemy target. Nevertheless, you will probably find them to be one of your most powerful weapons in your attacks upon the enemy.

At the beginning of the game you and the computer are each in control of one city, and you must decide what type of force to produce there. Here you really don't have much of a choice as to what you will produce, armies, although you may want to produce one fighter initially in order to rapidly explore the continent you are on. As you conquer more cities the choice becomes more critical as you are going to need a well-balanced force in order to defeat the computer. For example, if you don't build enough troop transports you will have a difficult time moving your armies from continent to continent.

There are essentially three stages of every game you play: (1) early, which mainly

involves exploration of the area around you and the beginnings of the expansion of your territory (Fig. 1); (2) middle, rapid expansion and production and usually the initial conflicts between you and the enemy; and (3) final, where you and the computer mass all your forces in the final battles for world domination. After playing a few games you will probably find that the first two stages generally last about the same number of days from level to level, but the final stage will last longer the higher the level. The computer can get very tough.

Combat occurs when one force attempts to move onto a sector occupied by an opposing force. The outcome of the battle is determined by the ratio of the attacker's strength to the defender's (rounded down in the defenders favor) along with the roll of a die. The result of combat can be the elimination of either force or a draw. Any surviving forces may also sustain damage which causes a loss of strength.

There are several ways in which the game can end. Obviously you can simply throw in the towel and start a new game. If all of your forces are eliminated the computer will recognize it and end the game. If the computer feels it has no chance at victory it will offer to surrender. If you accept, the game ends, but you can decline and try to completely eliminate its forces.

As I find myself saying again and again, this is another type of game that works extremely well with the Mac interface. Movement of a piece is accomplished by clicking on the adjacent square to which you wish to move a piece or by clicking and dragging to move a piece more than one square. Using the Moves menu allows you to do such things as moving a stack of pieces and setting a piece to patrol between two sectors, among others. Double clicking on a piece or a city causes appropriate information to be displayed. Also, the world map's scroll bars allow you to easily look at different areas of the world. Very, very easy to work with.

The sound and graphics are decent, but in reality take a back seat to the game play. The different forces are depicted in silhouette and are easily distinguished from one another as are yours from the enemy's. Sounds are limited to movement, combat, explosions, and warning signals.

I have observed two problems with Strategic Conquest, which PBI had never seen, and for which they could offer no solutions. One involves starting a new game while you are currently playing another. You go through the normal process for starting a new game, but the city you first control produces its force a day early. While this does not seem to affect things at the lower levels of play, at higher levels it causes me to experience a system error at about day 9. Obviously the game controller is getting confused. I have not

found any solution to this problem other than returning to the desktop and launching the game again.

The game will occasionally lose track of some of your pieces. This has happened to me primarily with my aircraft carriers with fighters on them. I try to land one of my fighters on a carrier and the game does not realize that the carrier is actually there. This can be extremely frustrating if you lose a fighter in this way when it ends up running out of fuel.

You cannot launch the game from a saved game. If you doubleclick on a saved game document, the finder responds with the message that it is unable to find an application to open the document. The result of this is that you have to go through the entire start-up procedure, which takes about five minutes, and then resume the game.

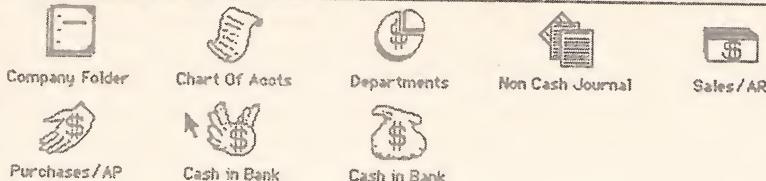
One other point worth mentioning is the length of times some turns take. The higher the level you play the longer the game will last and the greater the number of forces you will have to deal with. It can take quite a while to maneuver a large number of forces. This is not a complaint, but simply a reflection on how complex the game can get. The game I mentioned earlier that I am currently playing is taking about 15-20 minutes per day to move. You can see at this rate a game can take a while to complete. You will probably not be able to finish even a level 1 game at one sitting, but you are able to save games and resume them at a later time.

Strategic Conquest has one of the most unique copy-protection schemes that I have come across. Using some copy programs you are able to make copies of the disk that look identical to the original disk. The game, however, recognizes that this is a copy and plays the game at level 17, no matter what level you select, and so is two levels higher than the highest level the game is supposed to be able to play. According to information supplied by PBI, the computer player's production is so greatly increased at this level that it is impossible for the player to win. When a friend and I tried this out, he played the game for about thirty minutes before his cities were all laid to waste by a number of bombers.

Personally, I am quite addicted to this game, despite its flaws. It is an extremely challenging game whose personality changes from game to game. If you are looking for something you can sit down and play in a short time, forget this one. If, however, you are looking for something that will give you many hours of high quality game play, I urge you to check it out. Strategic Conquest

PBI Software, Inc.
1111 Triton Drive
Foster City, CA 94404
\$49.95

—Joel Reid



Small Business Accounting: MacAccountant

David vs Goliath; Apple vs I.B.M.; MacAccountant vs _____. You can fill in the blanks since anyone reading recent accounting software reviews for the Mac will know who the players are.

Hold it! What in the world am I doing writing a software review? Shouldn't I be spending my time with my clients' debits and credits instead of telling you how you should keep track of yours? Of course I should, but I'm angry!

Perhaps my anger is being vented towards one particular reviewer; but, in general, I'm also a little perturbed at accounting software reviews in general since they tend to gloss over important details. Before I do get off my soap box and get to the business at hand, I would like to publicly ask a certain big eight accounting firm computer consultant a question.

How in the world can he lambaste an excellent general ledger program like MacAccountant in such a prestigious magazine as Infoworld, and then a few months later, review three accounting programs in the other Mac magazine with nary a hint of displeasure? Especially since one of the programs is perhaps the worst accounting program for any computer this side of Georgia!

Now that I've got that off my chest, on to the review.

General System Considerations

Seriously now, MacAccountant will run on a 128K single drive machine; however, do yourself a favor and don't even consider this minimum configuration. A 512K two drive Mac is just fine; however, do yourself another favor, add a numeric key pad. The Numeric Turbo from Assimilation is great for any serious accounting work. The addition of a hard disk is a must for any serious business user.

A two drive 512K machine can handle up to 2,000 chart of account items (including customer accounts receivable and ven-

dor accounts payable items if you choose to use this feature (more on this later)). Unlimited, yes, unlimited transactions are handled with ease if you have an external disk drive. MacAccountant will warn you when you are about to run out of disk storage.

Although I have not tested the program with a full data disk, I did speak with a user who has filled a data disk and he feels the following storage estimates are about right. Each chart of account item (this includes accounts receivable and payable items if you are using this function) takes about 200 bytes of disk storage and each transaction takes about 75 bytes. To equate this to a typical small business, using only the general ledger features of the program, it means you could have 200 chart categories and process about 400 receipt and disbursement items a month without running out of disk storage. That's a lot of activity for many small businesses. If you use the accounts receivable and payable feature, double the bytes to 150 for each receipt and disbursement since two entry lines are required for each transaction; whereas, the basic general ledger requires only one line per transaction.

Running out of room on a data disk can create file maintenance havoc with many accounting programs, whether it be a Mac or an IBM type machine. Well, MacAccountant not only warns you of a storage problem, it takes you a step beyond the norm. With a click of the mouse, a new data disk is created and off you go. But wait, that's not all. It not only brings forward the current months ending balances, but it also brings forward all information needed to produce income statements, balance sheets, trial balances and related financial ratios for any prior month in the current accounting year. Oops! I just spilled the beans on a major reason why I think MacAccountant is a superior accounting program. The reporting features are simply one of the best I've seen, but I'm getting

ahead of myself.

Since the primary attribute of the Mac is the user interface, my first inclination is to jump right in to see what the program does. Of course, as an accountant for the last twenty years, I have a distinct advantage when it comes to accounting programs; but, I also jump before looking with most DOS programs, and all Mac programs. MacAccountant passed my first look with ease which indicates to me that it's not just another DOS based program ported over and made to look Mac-ish. I confirmed this fact with Digital, Etc. and for those wanting to know, it was written in Pascal from the ground up.

Another indication of MacAccountant's ease of use was my bookkeeper's reaction. Her neighbor has a Mac so I gave her a copy (with permission, by the way, from Digital, Etc.) to try. I was in the process of training her on the DOS accounting program I use for my client write-up work, and she was having a heck of a time understanding DOS and what were program files versus data files. I kept waiting for the phone call for help and it never came. She had set up one of her outside clients over the weekend, entered two months of data, and presented a financial statement to her client without a hitch.

By the way, as can be inferred by my comment in the preceding paragraph, MacAccountant is not copy-protected. However, anyone who is going to use a program seriously should always buy the program. This holds especially true with an accounting program so the manual is available and support is just a phone call away. I also do not want to infer that I use MacAccountant in my practice, because I don't. I honestly don't feel the Mac is ready for high volume accounting work required of an accounting practice. Besides, I have modified the dBASE II program I use extensively to suit my clientele and I have no desire to learn another programming language (please, no letters pointing out that dBASE II is not a true language). When and if Ashton-Tate brings out a Mac version of dBASE III, and Apple speeds up the finder, I will seriously consider converting.

The Manual

Before getting into the programs features, a word about the manual. Accounting, in general, can tend to confuse non-professionals and the more features in a program, the more confusing it gets. This is where the Mac interface really helps the non-accountant maintain an accounting system on a computer. Since MacAccountant fully utilizes the Mac interface, its manual takes a very simplistic approach. Perhaps too simple for some of my peers; but, for the untrained, it does provide a good step-by-step set of examples without overburdening one with detailed accounting

theory. One must keep in mind that the primary market for Maccountant is the average small business who only needs to keep track of receipts and disbursements in a basic accounting format, not necessarily in accordance with pure "generally accepted accounting principals" as defined by my profession.

Maccountant is perfectly capable of recording transactions and preparing reports in accordance with "generally accepted accounting principles;" but, the majority of you will (or should) rely on your own accountant when required to report to the IRS or your bank. The point being, the manual provides enough information to enable you to keep a good set of books, and your accountant will love you for it. It does briefly touch upon how to record depreciation or amortize prepaid expenses thru the general journal and if you need help, call your accountant or refer to one of the many books on accounting. The most important part of the program is to learn its functions, so read the manual (it has been type set in easy to read big letters and is only 80 pages), set up your chart of accounts, enter some data, and then refer back to the manual and explore Maccountant's additional features. Don't try to absorb the program in one sitting. Take one step at a time.

Setting up the Program

After you have followed the manuals instructions for getting started and you open the Maccountant icon, you will be presented with eight icons. The first is the Company Folder which provides a place for your Company name and the first month in your fiscal year (Jan is the default). If you wish, you can then enter a two level password, one for unrestricted access for all features, and a restricted one, which will not allow the operator to access the financial reports, account balances, and the company folder.

The set up of your Chart of Accounts is next. With a click of the icon you are presented with a sample chart which can be used as a starting point. Designing a good and descriptive chart of accounts should be given a lot of thought. If your records are currently computerized, that chart should be the starting point. If you use an accountant, he will no doubt have a chart already set up for your business. The system utilizes a four digit basic account number scheme. On the balance sheet, four additional digits can be used for either sub-accounts or customer/vendor numbers if you choose to utilize the accounts receivable and payable option. If you wish to departmentalize your revenues and expenses, a two digit department number would be used (more on departments in a minute). Sub-accounts are very useful if you don't want to print a lot of detail on your financial statements. As an example,

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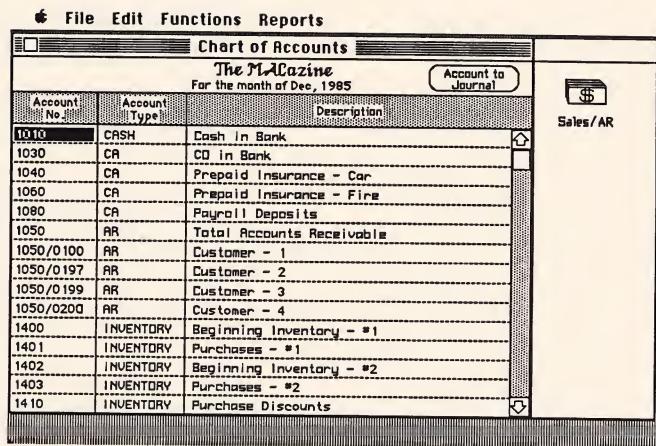
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you may want to set-up five or six accounts for prepaid expenses; but, for a clean and professional looking financial report, only one line summing the total of all prepaids should be printed.

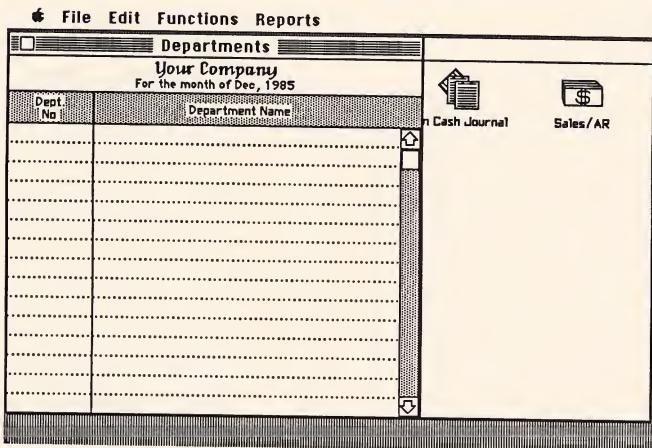
Accountant numbers and titles can be deleted on the sample chart by selecting Delete A Line in the Edit menu. To enter a new account number, use the scroll bar to go to the bottom of the screen and click the Accountant No. box (don't worry about numerical sequence since the account will automatically be placed in the right order). After entering the number, hit Tab for the Account Type box which is very important. This entry is required to tell the system what type of account it is for financial reporting as well as computing the various analytical ratios built into the program. Rather than trying to remember the type descriptive code, simply hit the Tab key and a good ole Mac dialog box will appear with sixteen button choices. Next, hit the Tab key to enter the account Description. I highly recommend that you use upper and lower cases for your descriptions since these will print on your financial reports and they will look better.

I have found, that for some strange reason, many accounting systems will not allow you to have more than one cash account. Well, Maccountant allows you up to Five Cash Accounts; but, be careful. If you set-up a cash account, it can't be deleted. This is not a serious problem, but since it is a cash account, two unneeded cash icons will be created which could be confusing to some. By the way, you can delete a non-cash chart of account item if NO entries have been posted to that particular number (this is one of the many control features of the program).

A brief word about Departments. Department descriptions are set-up by clicking the Departments icon which (as in all good Mac programs) can remain as an open window while setting up your chart. The description is important since it will be printed on each department profit and loss statement. Departments can represent product lines, rental properties, store locations, or even sales persons. Up to ninety-nine (99) departments are allowed; however, don't go overboard. Remember that when entering transactions in the various journals, you must always enter the department code in order to have accurate and meaningful reports. For faster data input, one may be better off setting-up separate account numbers to eliminate unnecessary key strokes. In other words, it's much faster to enter four digits digits for each transaction than six or seven digits. This holds true for any accounting program, not just Maccountant. If you have set up departments or sub-accounts, the system will help you by automatically inserting the required "/" after the account number. As an example, the account and



. This is Maccountant's Chart of Accounts.



This is the Departments entry sheet.

department number '6050/1' can be input as '60501' and after you hit Tab, the default setting will automatically post '6050/1'. This default feature also holds true when entering dates, which is very important for fast input and should be a feature in every accounting program.

Entering Transactions

For those who have not used a computerized accounting system before, I can not overemphasize the importance of quick and efficient data entry. This is the reason and numeric keypad is a must for any serious business use. When asked to write this review (by now its becoming an

in depth study, so bear with me), I looked briefly at some of the newer Mac accounting programs. Well let me tell you, I am amazed at the lack of good design by the top Mac packages when it comes to data entry. I found only one besides Maccountant which does not require you to enter the cash account number for every item posted in the general ledger module. If one is not using an accounts payable module, which many small business don't use or need, this means double the work for each check written when posting cash disbursements. The same with cash receipts when posted within the general ledger. This also holds true for most DOS accounting pro-

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grams and it drives me crazy. Since Macaccountant creates two separate icons for each cash account (one for receipts and one for disbursements) only one side of the entry need be posted. I will run thru a typical entry so I can point out why I think Macaccountant has superior data entry qualities.

Assuming you want to post some checks, you click the cash icon with the wings (stands for good bye money) and a grid journal appears. This grid resembles a regular check book register so one can view fifteen transactions at any time. Most programs offer-up a new screen after each debit/credit entry is made. The advantage to the approach used by Macaccountant, is that one can visualize all transactions entered during a current season by using the standard spreadsheet type scroll bar on the right of the screen. One of the menu choices is Month and this is used to tell the program what month is being posted, if it is not the current system date. You choose the current month, say May, and the screen automatically scrolls to the last transaction posted in May or the end of April, if May is a new month. This Month menu option is a very quick way to go back to prior months to review transactions (you can also use the arrow key at the top or bottom of the journal (the scroll bar button itself is used to move within the designated month)). Once in the proper month, you enter a date or hit the tab key to enter the current system date. Since many of us tend to post transactions sometime after the current month, you would enter a date as 0502 or 515, hit Tab and the date will appear as 05/02 or 05/15. You can also change the system date directly thru the Function menu. After that, and until the entry date changes, the date defaults to the last date entered (again helps speed-up data entry). The next entry is the Net Amount of the Check. You do not have to enter cents if the amount is in whole dollars. Hit Tab again and you enter who the check is paid to and a description if desired (it's always a good idea). A "/" should be used after the "Paid To" entry for any description you may wish to enter. The next entry, after hitting the Tab key, is the Check Number; but, no entry is usually required since the system brings the next check number forward automatically.

The good ol' account number is next. I always prefer having a printout of my chart of accounts in front of me for quick account number reference. However, it is not necessary since the Chart of Accounts window is only a click away and it can stay in the background (as well as all the journals) during the complete posting cycle. You simply click the background Chart of Accounts window and use the scroll bar to find the proper account. Click the account number and then click the Account to Journal button in the upper

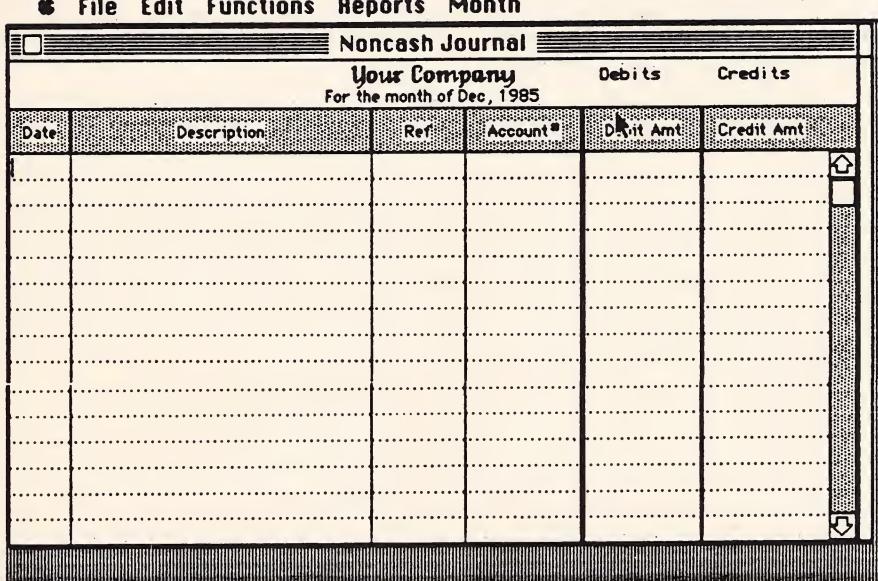
right hand corner and bingo, the journal reappears with the account number posted for you. So simple and no need to use the slower cut and paste function. If you do not use this method, but enter a wrong account number, a dialog box appears to tell you this. You then make your correction and the account title appears in the upper left hand side of the journal so you can verify the correct account one more time. Last, but not least, is the Amount box. If you recall, the Net Amt of Check was entered after the date. This amount also appears in the Amount box so most of the time you would just hit return for a new line. Contrary to some major Mac accounting programs, Macaccountant allows you to enter multiple transactions into the general ledger journals. I can't believe other programs don't provide for this, and it's just another reason why Macaccountant's design is superior. A common example of a multiple transaction, would be a credit card payment spread over two or three different accounts or a payroll check. Payroll checks present special problems since payroll taxes withheld from wages need to be posted as credits to the appropriate liability accounts. These credits are simply handled by using the mouse to click a small box before the Amount title labeled Cr. Once clicked, an "*" appears to signify a credit.

Anyway, for multiple transactions, you would enter the actual amount to be charged a particular account and then hit return. The cursor jumps down to the Paid To/Description box (not the Date or Net Amt of Check). One minor annoyance is that the Paid To is not pulled down from the previous entry, so you must retype it along with the Description. You then enter the Account Number to be charged or credited (the check number does default to the previous number) and hit the Tab to jump to the Amount box again. The amount required to balance the entry is already there; but, it can be changed for another multiple entry. Although this approach tends to keep you in balance, you can use the mouse and start another entry without the last one balancing. However, before closing the journal window, a dialog box will pop up telling you your error (account number needs a department code, amount out of balance, etc.) and the cursor will move to the box needing correction. Since the system does check for unbalanced entries before closing the window, and they are easy to spot and fix, I do not consider this a major problem.

The program provides another very powerful and time saving feature. Open the Function menu and you will see a Fix Incorrect Entry option. Once you have closed the cash receipts or cash disbursements journal, you can't go back to change or delete an entry. This audit control feature is not found in many accounting pro-

grams, and some feel it unnecessary; however, the advantages outweigh the disadvantages if you rely on someone other than yourself to enter transactions. The primary use of the Fix Incorrect Entry would be voiding a check or changing an incorrect posting. After you click the menu choice, Fix Incorrect Entry, a dialog box appears (with a default setting "Void a Check" if you are in the Cash Disbursements window or "Void a Deposit" if you are in the Cash Receipts window). When you click "OK," presto, a reversing entry in the appropriate journal is automatically posted leaving an excellent audit trail. A word of caution in using this very useful feature. It may not work properly unless you are voiding transactions during the current, or the previous month. Not a major bug, but annoying when you expect to see the voided item appear in right month in the Account History Report or the General Ledger detail. I tested this extensively to make sure the Trial Balance and Financial Statements for the month being adjusted were correct, and they were OK. The developer promised that this problem will be corrected in all versions shipped after January 1, 1986. Also, you must either change the month, using the Month menu option, or actually change the date box for the "Voided" transaction before the window is closed or the trial balance and financial statement will not be adjusted in the proper month (as mentioned previously, you can produce any report, for any prior month, at anytime). For most of you, voiding a check or correcting an entry using this feature can be done in the current month without a major distortion of your financial reports. One last annoyance. If you void a check, and then proceed to enter a new transaction, the system will automatically pick up, as the next check number, the next sequential number after the voided check. You must remember to manually change it or may end up with duplicate check numbers in the system. Digital, Etc. is aware of these problems but they have not been able to overcome the programming problems to correct it. I was told that they should have the problem licked for their new enhanced version, which will be available after the first of the year. You can, during the current posting session, go back and delete or change current entries at will. But, once you close the window, you must use either the Fix Incorrect Entry routine, or the Non Cash Journal to void or fix an incorrect entry.

One last dialog box appears, when closing the cash disbursements journal, asking you if you want to print checks. What, print checks? This is the last place in the world one would expect to see an option to print checks. I asked Digital, Etc. the reason for including such an option in such a strange place, and they felt that many small businesses may appreciate the



This is Maccountant's Non Cash Journal page.

ability to print checks as a time saver. I try to keep myself open to new and innovative approaches in accounting programs; but, I'm really not sure if it's a valuable and useful feature, or just a cute little idea. Since one needs to order the proper checks (the manual contains the information you need), I did not test this feature other than printing a few sample checks on regular computer paper and it looks fine.

All in all, the cash receipts and disbursement input features are among the best and easiest to use I've seen.

Non-Cash Journal

Accountants use the term Journal Entries to describe entries which go into the Non Cash Journal. This is where you record your beginning trial balance entries (after setting up your chart of accounts), or record depreciation, or other adjusting entries required. You may also use this journal to void or fix incorrect entries, rather than using the Fix Incorrect Entry function. It is in the same basic format as the other journals except the dollar entries go under the standard Debit/Credit columns. By the way, two additional choices are offered when using the Fix Incorrect Entry Function together with the Non Cash Journal. You can change an entry which has been Posted to the Wrong Account (if you are in the Cash Receipts or Disbursements window, you must also have the Non Cash Journal open to do this). You can also quickly switch the Debit/Credit entries in the Non Cash Journal if you discover you posted the entry the wrong way (this is a very common error, even for accountants).

The one feature lacking is the ability to set up recurring journal entries. This allows one to set up monthly depreciation

charges, or amortization of prepaid amounts, which may want to record each month. You could do a copy and paste routine each month; but, only one cell at a time can be pasted so this method would probably be slower than typing in the entire entry. The enhanced version will allow recurring entries.

Accounts Receivable and Payables

I can understand Digital, Etc. trying to offer more value for your software dollar, but I can't see many businesses using these features. Not that these options don't work, it's just not practical, in my opinion, for businesses who have a lot of credit customers, to use the Accounts Receivable feature. Using the Accounts Payable capabilities may work just fine for some of you, if the volume of purchases and the number of vendors are not too many. If you have maybe 25, to a maximum of 50, customers and a like amount of vendors, you could use this feature without too much trouble.

One of the major drawbacks, is that each customer or vendor must be set-up in the body of the actual general ledger instead of a separate sub-ledger. This increases the time required to find a forgotten account number and you may find yourself scrolling past hundreds of accounts to find what you want. Another draw back, is the Accounts Receivable and Payable account numbers are no longer four digits, but eight, which slows down data input considerably. Another major reason for computerizing your receivables, is to be able to speed up the invoicing process and produce monthly customer statements and Maccountant can't do this. Also, the ability to print vendor addresses on checks and maintain a vendor purchas-

ing history is an important feature lacking in the program.

For those interested in the Accounts Receivable and Payable features, the functions and data input are basically the same as cash receipts and disbursements. The only exception is, you are required to input a minimum of two lines for each transaction. This is needed since you must choose which customer or vendor you are dealing with and which income or expense account should be credited or debited. To record the cash receipt or payment, you would use the cash receipts or disbursements as discussed above. The system will provide you with aging reports for receivables and the payables. One problem with these reports is created when you fill up a data disk and roll the records into a new one. The aging does not maintain its integrity, so you must use a printed copy produced prior to the transfer of the data to a new disk until a three month cycle has passed. This problem is described in the manual so it should be considered a pain in the rather than an anomaly (a fancy word for a bug being used by Ashton-Tate that I just had to use).

Reports

As alluded to previously, I feel the reports are reason enough to choose Mac-accountant as your accounting program for the Mac. With the click of the Reports menu your are offered an Income Statement, Department Income Statement, Balance Sheet, and Trial Balance. Whats so great about that, you ask ? Well how about producing any of the aforementioned (plus more) for any prior month in your fiscal year, or current partial month, even if the earlier months data is contained on a full data disk. Not one Mac accounting program (and only a few DOS programs) can do this to my knowledge. In addition, you can produce a detailed Account History or General Ledger containing just one months worth of transactions, or a complete year to date history. Give the year to date reports to your accountant, and he will love you (assuming he can make up your reduced fees by providing you with other valuable services such as good tax planning). When running the detailed General Ledger, you are given the option to include the detailed Cash transactions if you wish. In most cases, you probably would not want to print the Cash details for the General Ledger History since it duplicates other reports and it can double the print time. This detailed report should be run a least annually for a complete audit trail. You can also produce a Check Register and a Daily Cash report.

When you open the Reports menu and choose a report, you are presented with a dialog box and you choose the month or months for the desired report. Assuming you want to produce an Income

Statement and you are in the month of November, a default for all the months in your current fiscal (thru November) would appear and you would simply click the OK button. If you just wanted a report for November, you would simply click the Nov and then the OK button. The month options are presented for all reports except the Receivable and Payable aging reports.

The Income Statement and Balance Sheet formats can't be modified. For most of you, this is not a serious drawback, since those programs who do allow you to design your own format tend to be more complex and hard to set up for the average business person.

There is a solution if one wants to present a financial statement to outsiders which is in a professional looking format. Simply bring up the desired financial report (by the way, some programs only allow one to print a financial statement, not view it on the screen) and choose the Write To File option in the File menu. Click the OK button and a standard ASCII text file will be created for editing with your favorite word processor.

While on the subject of Write To File, Maccountant does allow a file to be created which can be read by Multiplan, Excel, Crunch or Jazz (database or spreadsheet). No other Mac accounting program that I

have seen can do this. The main advantage of this, is the ability to analyze actual data in the "what if?" environment of a spreadsheet. In my opinion, it is much easier to create budgets on a spreadsheet since, accounting programs that do provide for budgets require a great deal of set up time and are harder to maintain when assumptions change. I tested this option by writing a Balance Sheet to a standard text file, an Income Statement to a Jazz spreadsheet, and a Trial Balance to a Jazz database and it worked fine. One last report, not found in many accounting programs, is the inclusion of fifteen (15) common financial ratios. Since the manual does not explain the meaning of these ratios, you should ask your accountant, banker, or go to the library for an understanding of what these ratios can tell you. In short, they help you analyze your business performance.

Printing reports with Maccountant is just like any other Mac program and it allows all the standard Page Setup and Print options. The only problem is with the Mac itself, since it writes the document to disk before printing it. If your data disk is close to being full, you may have to exit Maccountant and move some files around to another disk. Another good reason to have a hard disk since moving

files requires that you have a little working knowledge of the system.

In conclusion (finally, you sigh!), Maccountant is far superior in ease of use and overall functions, when compared to other Mac accounting programs that I have seen or read about. Any criticisms I have for the program are not serious enough to not give serious consideration to Maccountant because, it simply gives you much more for the money.

At the current retail price of \$149.95, it is well worth the investment to start using the program now, and then upgrade if your business requires the more powerful, enhanced version.

Maccountant
Digital, Etc.
1749-14th Street
Santa Monica, CA 90404-9990
\$149.95

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Circle 33 on Reader Service Information card

Turbo Maccountant

Digital, Etc. released a new, fully integrated accounting program on one disk at the San Francisco Appleworld Exposition. This program contains all the powerful features described in the review above plus a full-blown accounts receivable invoicing system and accounts payable vendor file which allows printing of checks with names and addresses for easy mailing. It also includes a real-time payroll capability which includes paycheck writing and tax filing worksheets, as well as help menus and a free videotape tutorial. This \$495 package will provide small businesses with all the accounting one would expect from more expensive packages.

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Atlas by Micro:Maps is a three volume set of MacPaint clip-art for making maps on the Macintosh. Yes, another clip-art collection, but MacAtlas is more useful than others. Maps are a practical way to communicate geographic and demographic information in an understandable form. Clip-art maps can save a lot of time and prevent a lot of frustration in making maps for research, analysis, advertising, business communication, publishing, and educational use. If you need a map of MX racetracks dotting the western U.S. for your Congressional testimony, a map of troop movements during major battles of the American Civil War, or a demographic map for a big marketing campaign, MacAtlas is a very fast way to get it.

Volume 1 consists of projection surface maps of the U.S. by state, region, and division. Micro:Map is releasing two additional volumes this year. Volume 2, available around 15 August, is a collection of maps of the World by continent and country. A globular projection world map and continental map of Africa were included on the review disk. They were consistent with the quality of maps elsewhere on the disk. Volume 3E and 3W, available about 1 October, will consist of U.S. states and counties; part 3E is states east of the Mississippi and part 3W those west.

MacAtlas maps (Figure 1) come in two formats, simple outline and "black." Simple outline maps are outlines of counties, states, regions, countries, or continents. Black maps are simple outline maps with traced edges and filled black areas. (Trace Edges, YE, is an option available under the MacPaint Edit menu. Tracing edges simply outlines drawing lines similar to the way YO outlines font letters.) Maps come in three sizes, 8×10 inches, 5×7 inches, and clipboard size, roughly 4×5. The review disk also contained two outline boundary maps of the U.S. smaller than clipboard size and a MacPaint document of custom patterns suitable for producing professional quality choropleth (shaded) maps.

Map Making

I produced four maps using MacAtlas, MacPaint, MacDraw, MacWrite, Microsoft Chart, and Switcher. Figure 2 is a reproduction of a textbook map showing the regional divisions of the West Publishing Company's National Reporter System, a system for reporting court cases. Like other clip-art products, the MacAtlas disk is meant as an archive; it is not for everyday use. After loading MacPaint, I locked it and inserted it into the internal drive. I opened the custom patterns document and saved it as a new

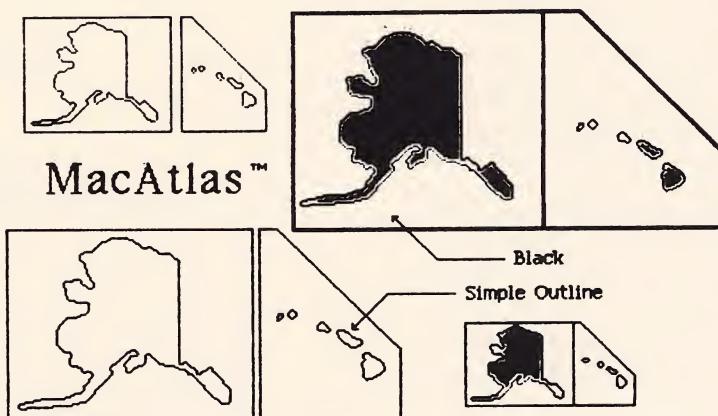
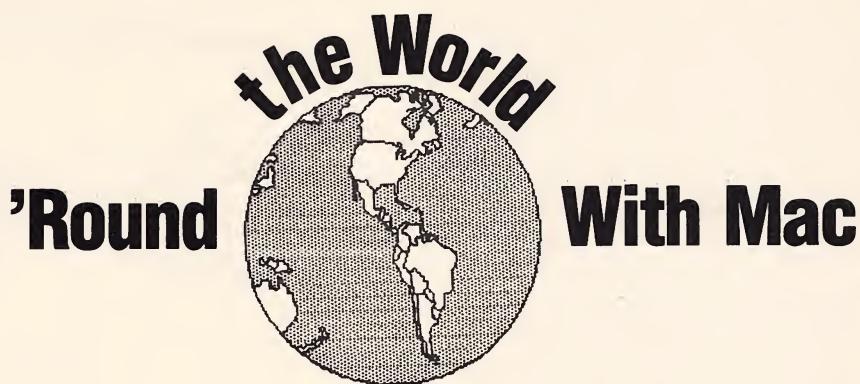


Figure 1: . . . MacAtlas map formats

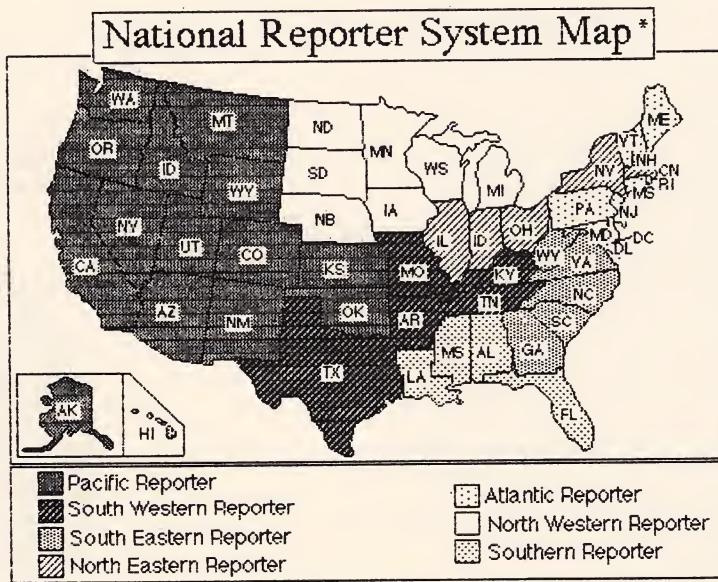


Figure 2: . . . a choropleth example

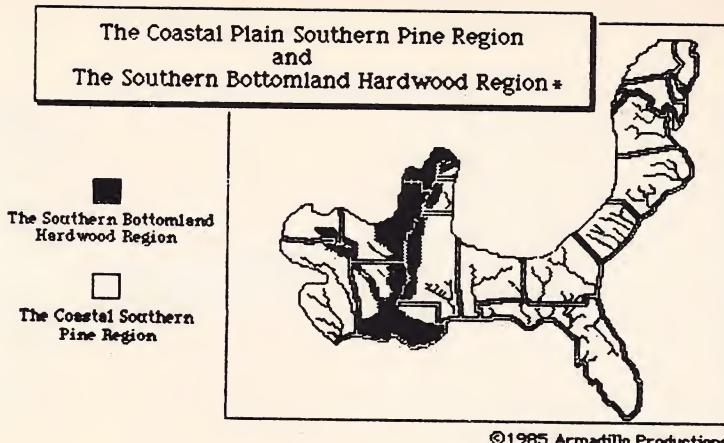
document. I then opened and copied a clipboard size U.S. state boundary outline map from the archive disk into the new document. I used the paint can to fill in patterns for the different regional reporters and text to identify states by their post office abbreviations. A title, legend, source credit, and copyright and the result is an attractive, informative choropleth map very similar to the original textbook map.

MacAtlas's documentation is above average for a clip-art package. Its 37 well-illustrated pages include mapping techniques, example maps, ideas for customizing maps, and warnings about common MacPaint problems. One such problem occurs due to the interaction between patterns and map lines. I experienced this problem with the National Reporter map and corrected it with fat bit editing. It is advisedly easier to shade black maps because traced lines are not part of area fill patterns. The user's manual has step by step tutorials on sizing and resizing maps, lettering, map designs and symbols, and combining maps with other graphics. It contains hints for printing maps with both the Laserwriter and Imagewriter. The manual's section on lettering techniques is a short lesson on cartographic economy and good taste.

The second map I attempted (Figure 3) is based on a map from Regional Silviculture of the United States by John W. Barrett. The original map was drawn by Erwin Raisz for his book, Landforms of the United States. The success of my first map quickly faded as I worked with the silviculture map. I thought this map would go as quickly as the first; it didn't. I spent more time on this map than the first and am not as satisfied with it. The problems I encountered were due to my preconceptions about how maps should look as well as MacAtlas's limitations.

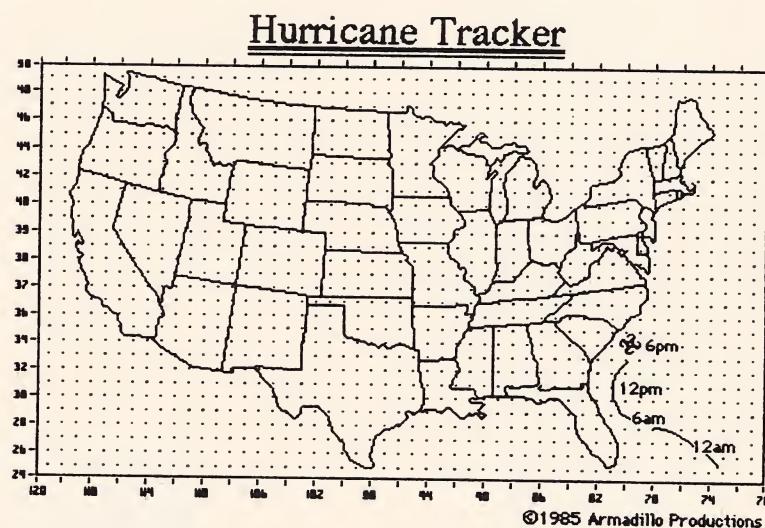
Maps include a tremendous amount of detailed information. A good map can provide hours of good reading and never say the same thing twice. I tried to put some of that quality into the silviculture map. That was a mistake. The scale of the map should be appropriate to what is mapped. The more detailed you make a map window, the more environmental objects are represented. A map "window" is a function of scale; scale reduces objects to a manageable size. MacAtlas maps are not flexible to adjustments in scale. The more I worked with the map window, the more impossible it became to show anything without eliminating everything. I had created a communication problem. I couldn't say what I wanted to say in the space I had to say it.

Keep it simple. Maps, like all forms of communication, have limits. Maps must be in proportion to what they represent. It's not convenient to copy trees at their natural size. MacAtlas maps can be sized



*Source: *Regional Silviculture of the United States*,
by John W. Barrett, The Ronald Press Company, New York, 1962.

Figure 3: . . . you can't draw trees the size of trees



*Figure 4: . . . keep it simple;
make it less detailed, more abstract*

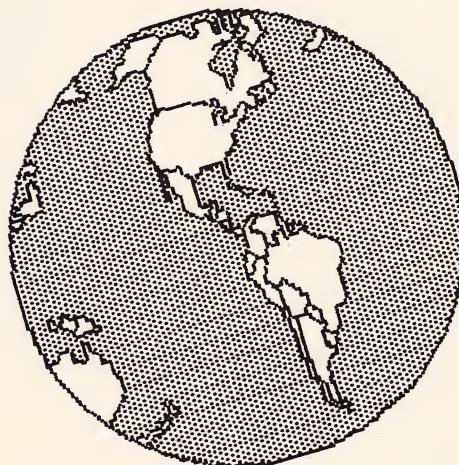


Figure 5: "What place would you advise me to visit now?" asked the Little Prince.

World Population Growth

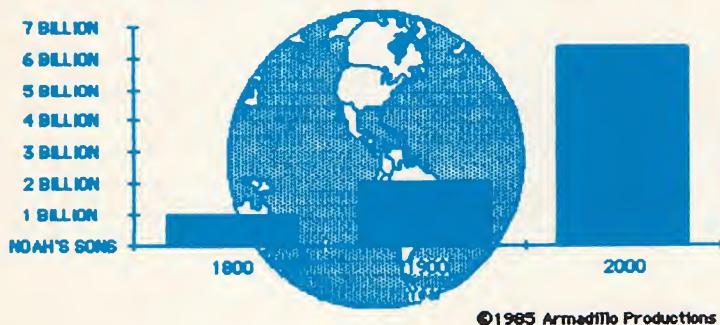


Figure 6: "The planet Earth," replied the geographer. "It has a good reputation."

and resized with the selection rectangle, I call it the marquee, and Y-Shift to fit most mapping purposes. Any resized map, either sized smaller or larger, requires editing in fat bits. MacAtlas mappers will be more successful with maps that have a large degree of abstraction (Figure 4).

World Making

Temporarily discouraged, I loaded MacPaint and MacDraw into Switcher to look at the rest of the maps on the locked archive disk. I copied maps onto the Clipboard and used the Y-Option-[and Y-Option-] in Switcher to paste them from MacPaint into MacDraw and back. I realized no global map was included in the map documents. The earth is not what is known as a developable surface. In other words, it cannot be flattened without distorting its geometric properties of direction, distance, area and shape. I decided that if I could create a globe from MacAtlas maps, I might erase the last disappointment. I attempted an equatorial aspect map of the western hemisphere using clips from MacAtlas maps.

Still using Switcher, I created a sphere in MacDraw and pasted it into Macpaint. (Because Macintosh graphics drawn on the Lisa 2/5 are distorted, I verify shapes with a set of vertical and horizontal rulers created from screen pictures (Y-Shift-3) of MacDraw rulers and saved in the Scrapbook.) I saved the new document and moved the drawing window below the globe. With Art Grabber (thanks to Bruce Twickler and Marc Canter of MacroMind), I opened the globular projection world map on the archive disk, copied North and South America and pasted them into the globe document. I rotated the continents with ClickArt Effects until they gave the impression of

being tilted and curved and moved them with the lasso onto the globe.

I continued to cut smaller portions from the globular projection map—Japan, Australia, New Zealand, Siberia, Iceland—rotating them and moving them onto the globe. I edited the final outlines with fat bits. After I inspected the globe's perimeter for bit leaks, I filled in the oceans with the paint can (Figure 5). Less than seven days. Finally, I installed Microsoft Chart into Switcher and built the world population chart based on numbers from Global Future: Time to Act, Report to the President on Global Resources, Environment and Population, January 1981, Council on Environmental Quality, United States Department of State. I copied the graph onto the Clipboard, switched to MacPaint and pasted it into the finished map (Figure 6).

"...but then I wonder what Latitude and Longitude I've got to?" MacAtlas has a place in many business and professional clip-art collections. Combine it with a census database like People In Places* and presentation quality classification maps are possible. If you collect information for statistical and demographic mapping, a lot of information and on a regular basis, clip-art maps will help you until something else comes along.

Atlas from Software Concepts is a useful but limited geographic information application designed for the Macintosh. Atlas's rotating global map is linked to a database of information ranging from average wage to median temperatures for approximately 2500 world cities. The link provides a route between the map and detailed information that the map alone cannot represent.

I would like to see products like STATMAP for the IBM PC developed for

the Macintosh. STATMAP, formerly from the Ganesa Group, now marketed by Rand-McNally InfoMap, reads statistical data such as state, county, zip code, or census information from dBASE II and ASCII files and generates maps based on the data. Maps can be produced on screen or plotter.

STATMAP is presently supported with RANDATA, an extensive database that combines statistical and economic data with digitized geographic boundary files of states, counties, congressional districts, zip code post offices, census tracts, Areas of Dominant Influence, and aggregates of census tracts known as Metropolitan Statistical areas. RANDATA statistical data is revised annually. It is possibly the most comprehensive locational database available on a microcomputer as it contains the names and coordinates for over 135,000 places in the U.S. and a similar file for over 100,000 places overseas.

Macintosh is the perfect graphic environment for map making. Even a Hobbit needs a good map.

MacAtlas, Volumes 1, 2, and 3E and 3W, \$79.00 per volume, list.
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—Michael Holloway
Michael Holloway is a cartographer for the Forest Products Division of Temple-Eastex, Inc. in Diboll, Texas.

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Due to the press of holiday schedules and their conflicts with publication timetables, this month's column is (we regret) abbreviated beyond the norm; in our next issue we'll resume our featured article format.

• BUSINESS FILEVISION

The Fall issue of Filevision Magazine, available by request at no cost from Telos Software Products, 3420 Ocean Park Boulevard, Santa Monica, CA 90405 214/450-2424, is devoted exclusively to Business Filevision, and contains numerous examples of "business" uses of the product. A number of new Filevision/Business Filevision templates are announced, including:

- MacMap Mapping Templates from Steve Poizner, 4030 Moorpark Avenue, Suite 123, San Jose, CA 95117 408/985-7400;
- Vineyard Management from Tony Stephen, 2300 Highway 175, Hopland, CA 95449 707/744-1320;
- TimeBiller from David Thomburg, Innovision, P.O. Box 1317, Los Altos, CA 94022;
- Smartpage Educational Courseware Development from Joel MacNamara, P.O. Box 511273, Salt Lake City, UT 84151-1273;
- Dentivision on Macintosh from B. Muller, P.O. Box 32 Postkantoor Charlottelei, Antwerp 11, Belgium;
- Goal Control from Gary Handel, Integral Design Systems, 2464 Lakeview Avenue, Los Angeles, CA 90039 213/664-0319; and
- Sports Medicine from Barry Ellman, M.D., 254 Stratton Road, Rutland, VT 05701 802/775-6887.

Other topics include the use of Filevision in Airport Management, Pop-Ups in Business Filevision, a Business Filevision Tutorial from David Alford (available direct from Telos @ \$39.95), Business Using (What Else?) Business Filevision, Smart Drawings, Telos new VAR Program, Stage Management with Business Filevision, File Conversion, Templates, Using The Laserwriter, Switcher Applications, Environmental Databases, and more. An outstanding publication on an even more outstanding product; get a copy today!

• EDUCATION

Chariot Software Group, 3659 India Street, San Diego, CA 92103 619/298-0202, has released a Macintosh version of its Test Generation software, MicroTest II. The

program allows for the creation of a database of 10,000+ questions from which tests of up to 250 questions may be created in identical or multiple versions. The program supports MacPaint picture files. MicroTest II is available from selected dealers and textbook publishers who supply both software and question data banks for use by adopters. Suggested list price is \$195.

• GENETICS!

Textco, 27 Gilson Road, West Lebanon, NH 03784 603/643-1471 has announced the release of The DNA Inspector II, a "friendly" (aren't we glad of that!) DNA Analysis Program. If you need it, you probably know it . . . we're uncharacteristically too timid to venture an explanation of the program's features. Interestingly, the program incorporates SmoothTalker speech. Suggested retail \$245; users of DNA Inspector (the original) may obtain upgrades for the difference in purchase prices (\$136).

• REAL ESTATE

RealData, 78 North Main Street, South Norwalk, CT 06854 and P.O. Box 691, Southport, CT 06490 203/255-2732 has announced a marketing agreement with the National Association of Realtors (NAR) under which the NAR will offer the complete line of RealData software products directly to its Realtor members. The marketing effort will focus on the Macintosh. Programs currently available include Property Management, Level I, The Mortgage Qualifier, Listing/Prospect Data Management and Real Estate Investment Analysis.

• INVESTMENTS

Smith Micro Software, Inc., P.O. Box 7137, Huntington Beach, CA 92615 714/964-0412 has entered into an agreement with Spear Securities, Inc. under which Spear will private label the Smith Micro line of investment software, including Market Link for the Mac. The full purchase price of the software may be earned through trading commissions for a full rebate.

• dMAC III

Format Software Gmbh has announced the availability of dMAC III, touted as "the first Macintosh programmable database compatible with Ashton-Tate's dBASE III." If the product lives up to the claim, it should have a major impact on the de-

velopment of Vertical Market applications for the Mac, and may become a "power standard." The product is available through Datalogica, Los Angeles, CA 213/75-0582 at a suggested retail of \$495.

• APPLETALK

The AppleTalk Developers Association (ATDA) announced its formation at the Fall COMDEX. The association is a trade association representing firms marketing or developing products that work with the AppleTalk LAN. For further information contact Guy Andre Mariande, c/o Tangent Technologies Ltd., 5720 Peachtree Parkway, Norcross, GA 30092 404/662-0366 or 496-1303.

• APPLETALK-ETHERNET

Kinetics, Inc., 3182 Old Tunnel Road, Suite H, Lafayette, CA 94549 415/947-0998, has announced its FastPath/Standalone gateway between AppleTalk and "the ubiquitous Ethernet LAN" thereby making possible the connection of multiple Macintoshes, LaserWriters and other AppleTalk equipment with Ethernet-compatible host computers. The gateway is supported by Kinetics' K-TALK software, including host driver software, programmers' libraries, and applications for file, printer and terminal drivers. Fortune 500-style communications and applications.

• ACCOUNTING

Great Plains Software, 1701 S.W. 38th Street, Fargo, ND 58103 701/281-0550 has recently released enhanced versions of its Job Cost and its Crop & Livestock accounting modules for the Great Plains Hardisk Accounting Series.

• APPLICATIONS GENERATION

Micromotion, 8726 S. Sepulveda Boulevard, #A171, Los Angeles, CA 90045 has released the first complete MasterFORTH Target Application Generation System (TAGS) which allows for the creation of optimized application programs for virtually any programming environment. MasterFORTH retails for \$125 and the TAGS for \$495.



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The MACazine's Professional Services Directory is reserved exclusively for Value Added Resellers (VARs), Consultants, Dealers, and others offering "expert" services to the Macintosh user. Information on advertising rates and deadlines for the Professional Services Directory may be obtained by contacting Mary Germany, The MACazine, 113 East Tyler, Athens, Texas 75751 (800) 624-2346, in Texas (214) 677-2793.

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Figure 1-A

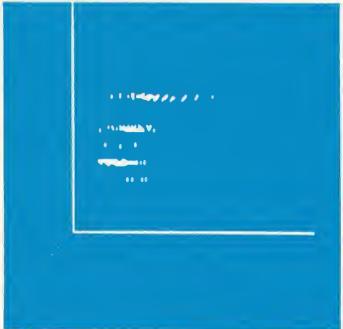


Figure 1-B

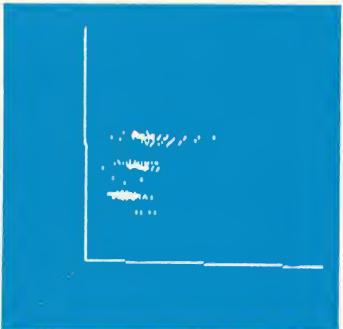


Figure 1-C

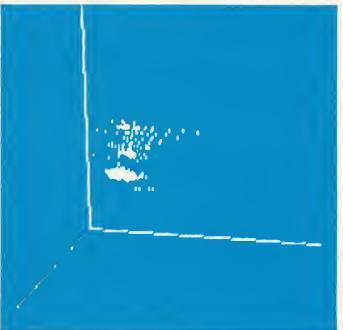


Figure 1-D



Figure 1-E

Preview: MacSpin



Figure 1-F

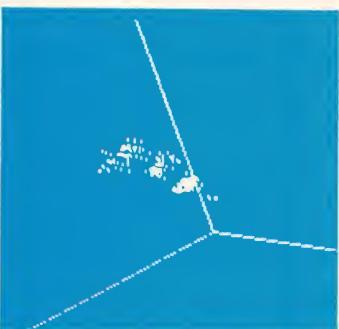


Figure 1-G

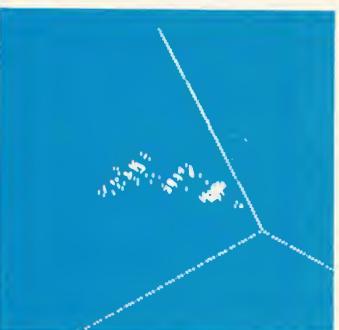


Figure 1-H

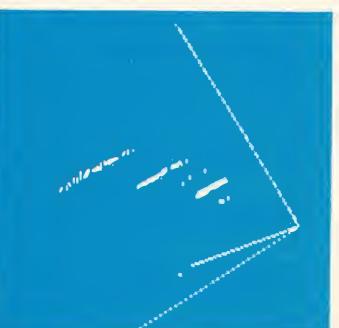


Figure 1-I

Visit To A Small Planetarium

MacSpin is an information observatory which looks not into astronomical darkness but into a universe of information. MacSpin, from D2 Software of Austin, Texas, is a data planetarium disguised as a three dimensional statistical analysis program.

Mainframe statistical packages, programs like Statistical Package for the Social Sciences (SPSS), BMD from Statistical Software Inc., and SAS/STAT from SAS Institute Inc. which graphically represent information in three dimensions, have played an important part in statistical computing for years. MacSpin takes advantage of the Macintosh's high resolution, bit-mapped display, and graphics capabilities to integrate graphics and statistical analysis like those found in these mainframe packages. With MacSpin, a Macintosh user can look at data in a way he never could with the deviations, chi squares, and regressions performed with spreadsheets or statistical packages.

Spreadsheets are powerful tools for two-dimensional concepts, 'what-if' questions. Statistical packages use regression, multivariate analysis, multiple discriminative analysis, and other methods of statistical analysis to summarize information and give real, bottom-line numbers. Both applications are excellent analytical tools if all the information can be fit onto one screen. When you can't see all the variables included in an analysis, there is a risk of picking up data that is exceptional rather than pertinent and crucial. So, information in a spreadsheet or statistical analysis must always be reduced. The number of variables must be summarized and, therefore, limited. MacSpin lets you think about all the information in an analysis by showing you all of the information.

Star Clouds

Seeing is difficult. Since MacSpin displays an entire dataset or collection of information, it is especially difficult to show what MacSpin does on the two dimensional pages of this magazine. Figures 1A-1I, are a series of cut outs from MacSpin screen dumps. The cloud of points or "events" displayed is a dataset of information about 380 makes and models of automobiles. Each point in the display is the intersection of three pieces (X, Y and Z) of information about each automobile—number of cylinders, gallons of fuel used in a mile of travel, and size of engine measured in cubic inches. The data record for each automobile contains eight variables, any three of which could be combined to produce a point in the cloud. A fourth variable can be selected and added to the analysis in a real time scroll bar.

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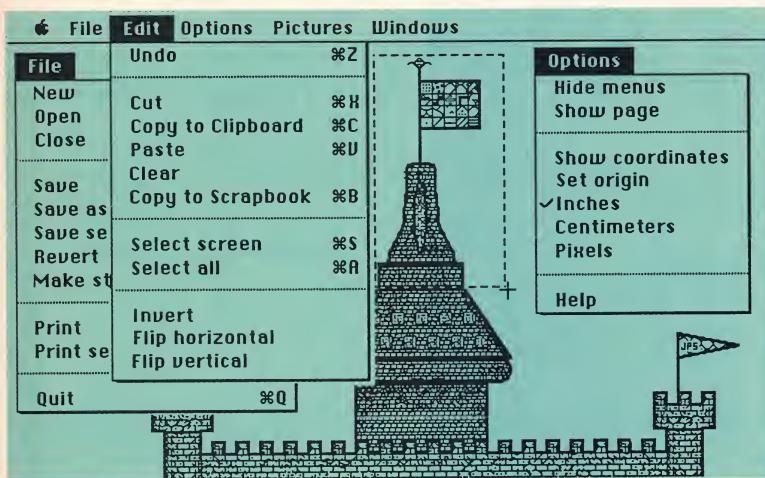
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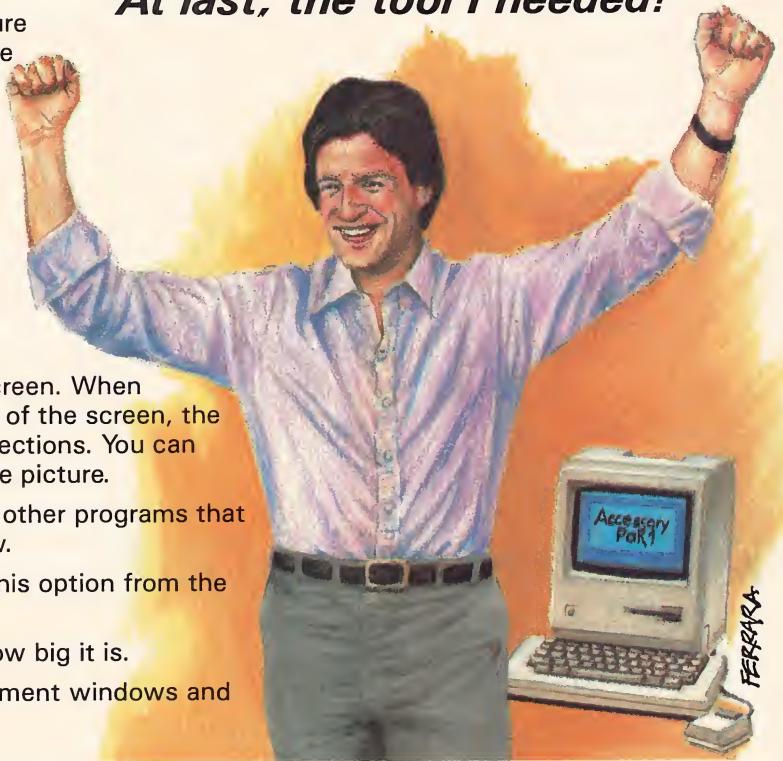
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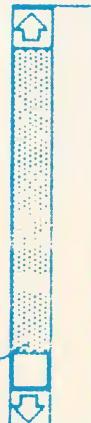
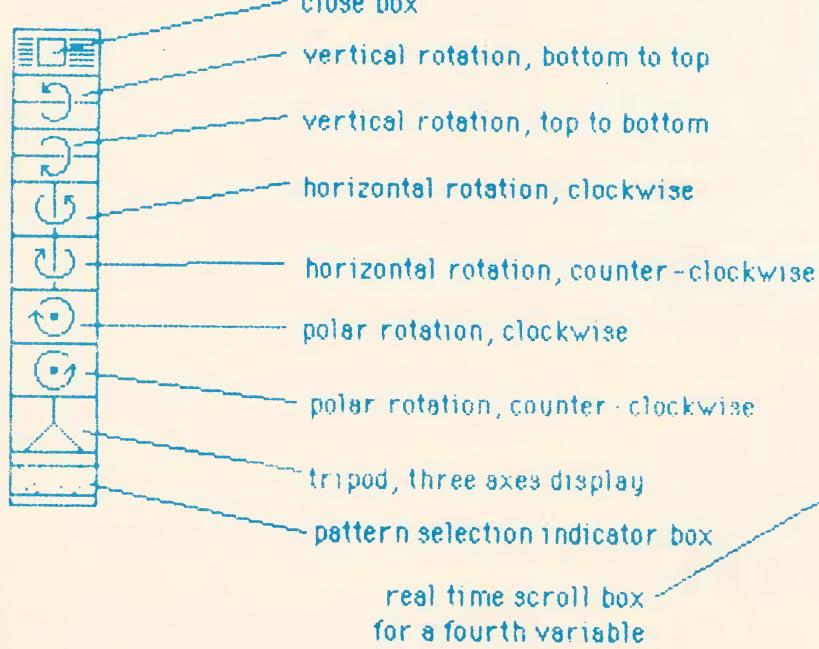
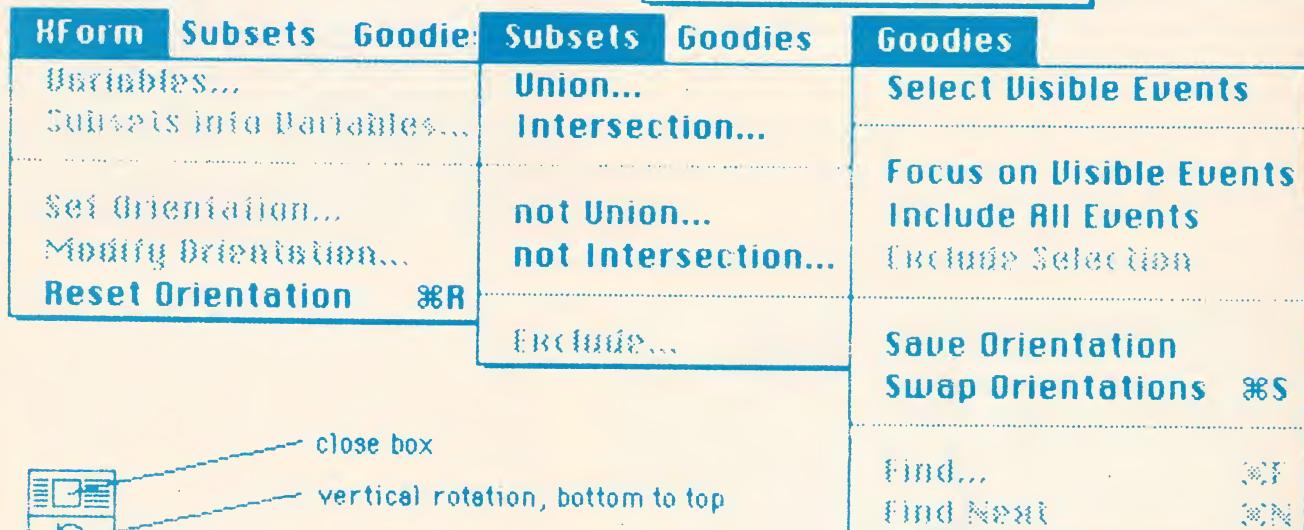
System requirements: 128K, 512K or XL.
Screen Saver is not relevant to the XL.

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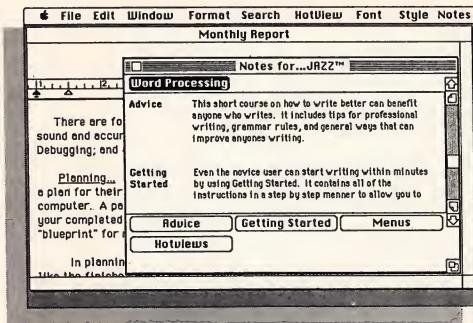
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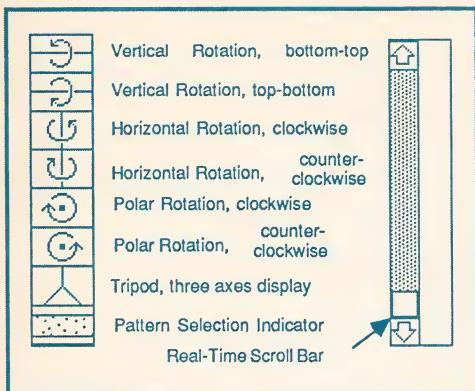


Figure 3

Figure 3 shows MacSpin's rotation controls and real time scroll bar. Operating the rotation controls is as simple as pointing and clicking with the mouse. As long as the mouse button is held down, the data cloud will rotate. The real time scroll bar animates the effect the values of a fourth variable on the displayed dataset. At the bottom of the scroll bar the value range for the fourth variable is complete. At this point, all points are displayed because they all share at least one value in the entire value range. As the elevator scrolls up the scroll bar, the value range is narrowed, so fewer points are displayed. At the top, no points are displayed.

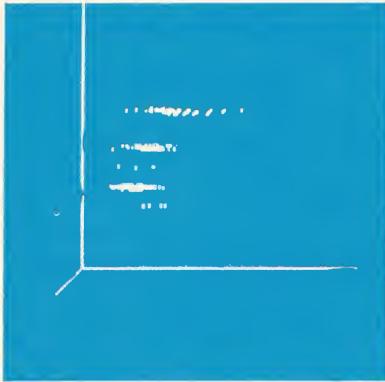


Figure 1-B

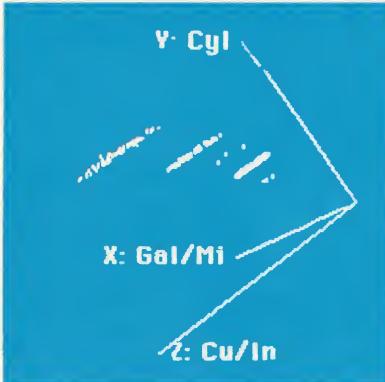


Figure 2

Two Thousand Light Years From Home

The five horizontal "rods" ordinate to the y-axis (Figure 1-B) are formed by the alignment of events that share a number of cylinders value—eight cylinder automobiles in the top rod and three cylinder autos in the lowest rod. A rod is MacSpin's way of displaying groups of coincidental events. The lowest rod, three cylinder automobiles, is rotary engine Mazdas. The large rod above it is, of course, four cylinder diesels, then the rod for six cylinder automobiles. Above the six cylinder rod is an area where seven cylinder automobiles would be represented. The top rod is for eight cylinder autos. The x-axis values are gallons of fuel consumption per mile of travel. The values increase in a positive direction along the x-axis. MacSpin can show axis names (Figure 2). Because they tend to clutter the display, I left them turned off. Yet, even without axis names or value scales, it is still easy to see the difference between the economy models and the fuel hogs. If you can see this difference, you are almost oriented to the MacSpin display.

The unseen third axis or z-axis points outwardly from this page. It shows different sizes of automobile engines. As the axes rotate (all three will rotate) the third axis swings from its hidden position down and to the left (Figure 1-B, 1-C). This rotation continues in the next frames (Figures 1-C through 1-E) by two clicks of the vertical rotation, top to bottom control and two clicks the horizontal rotation, counter-clockwise control. As the cloud rotates it breaks apart and begins to blur (Figure 1-F). It looks less like information and more like a confetti parade. But this display is the essence of a MacSpin statistical analysis.

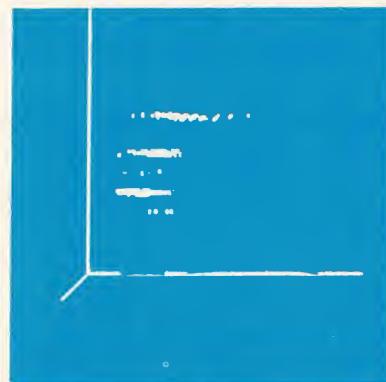


Figure 1-B

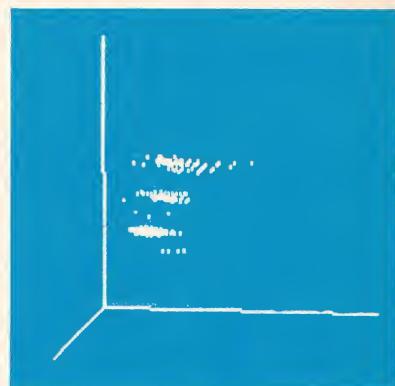


Figure 1-C

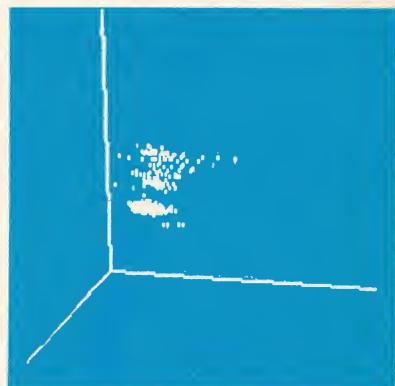


Figure 1-D

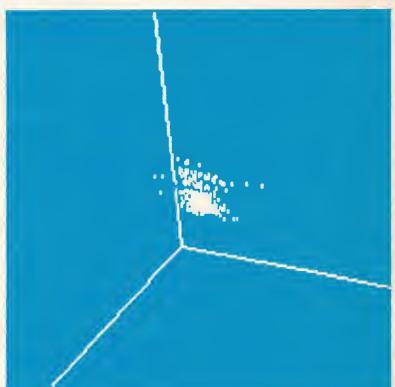


Figure 1-E



Figure 1-F

A Million Light Years From Home

Statistical proof, the probability we will accept false assumptions or reject true assumptions, is the basic form of proof used in investigations about what we see when we look at the world. We never know definitely in any particular case whether the assumption we make is true or not. If we have to make a decision on one of two dismal possibilities, we are more likely not to choose the right one or the wrong one, but the one with the poorest chance of occurring, the one with the lowest probability. Making uncertain decisions and doubtful predictions is our only preparation for the future. Mathematical tools and statistical methods cut down our chances of making wrong choices and increase the likelihood that we will make appropriate ones.

If MacSpin creates an uneasy sense of statistical vertigo, it is because it doesn't use verified statistical methods. It uses the human eye and mind. Look at Figure 1-E. It's a meaningless, white blob. Now look at the axes, and think about their values. Number of cylinders is the vertical or y-axis, gallons per mile is the right or x-axis, and size of engine is the left or z-axis. In Figure 1-F a spray of points has exploded from the data cloud along the z-axis. In Figure 1-G the point cluster is still scattered, but you might be able to see rods forming. There is still a good size concentration of points in the cloud. In Figure 1-H the rods are better defined, and the concentration of points in the cloud is disappearing. A couple more rotations and the rods are well defined (Figure 1-I). Figure 2 shows the axis names turned on.

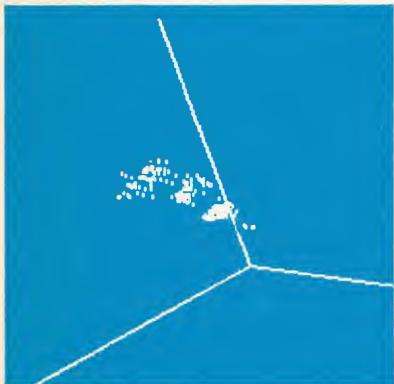


Figure 1-G

MacSpin has rotated the entire automobile dataset three quarter turns or 290°. It can rotate the dataset universally. It can

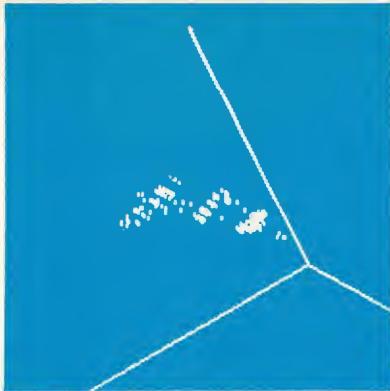


Figure 1-H



Figure 1-I

limit the number of points displayed by creating sets, unions, and intersections of points. A subset or group of points of interest, can be selected with a marquee. The selected points will be highlighted and brighten noticeably. The subset can be defined as a union or an intersection and assigned a name. MacSpin can display only the subset for analysis. Several subsets can be defined.

MacSpin can identify an individual point. If the initial display shows an outlier point at it with the cursor, click, and its first alphabetic record value, usually its name, will be displayed. Release the mouse button and the record name disappears. The release version will provide an option for viewing the event's entire record when its point is selected.

MacSpin permits any axis to represent any variable in the dataset. Select the variable of interest in the Variables window by pointing and clicking on it. In this case, Acceleration from 0-60mph is selected. Drag it over the bulb at the end of the axis that will order it (Figure 4-A). It will replace the current axis variable. The data cloud shifts to reflect the change of information (Figure 4-B). The axis scale can be either a free scale or a freeze scale. A free scale scales ordinate values along their axis. A freeze scale scales ordinate values

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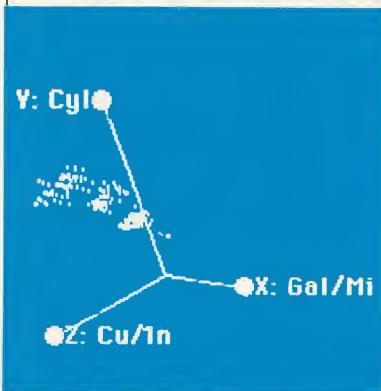
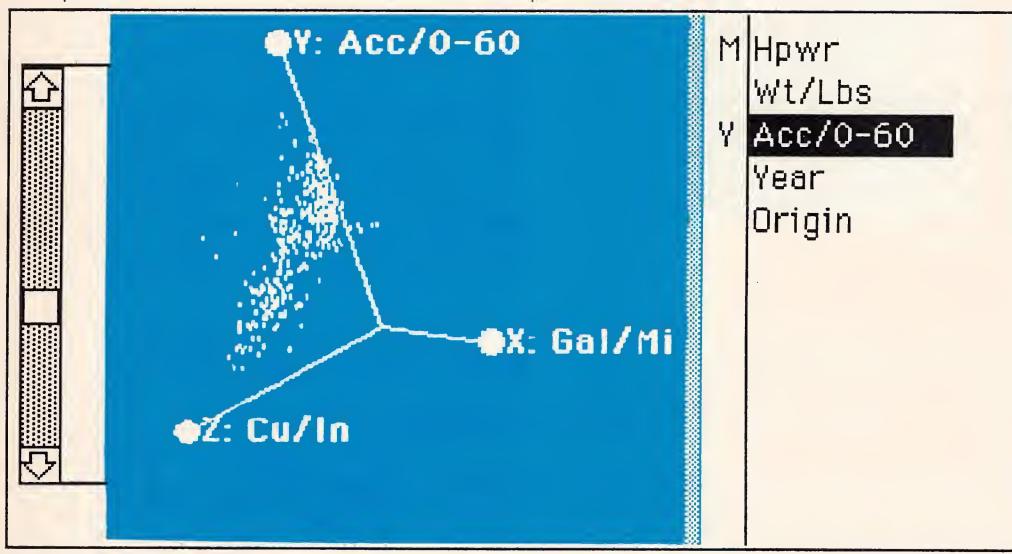
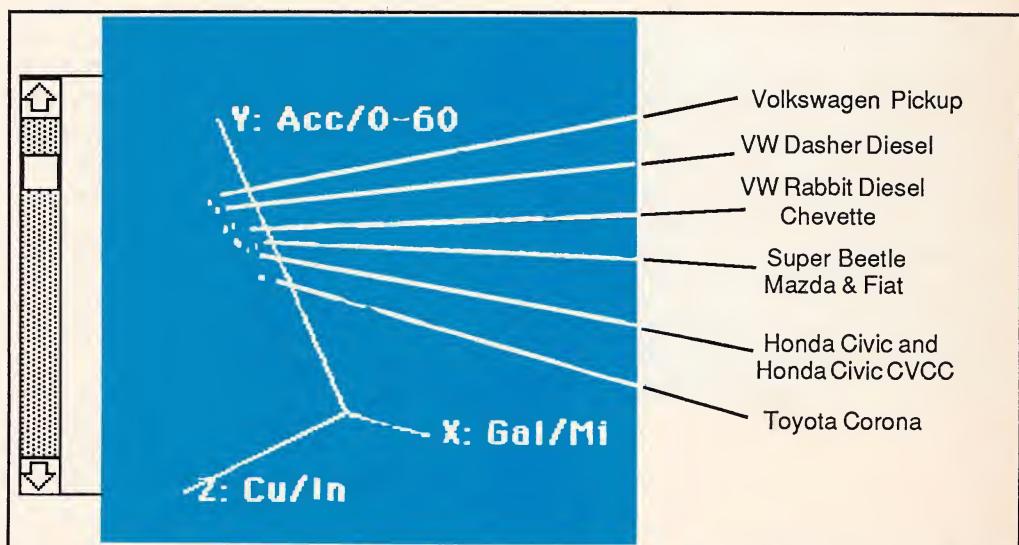


Figure 4-A



4-B



4-C

along all three axes to one scale determined by the lowest and highest value of all the values displayed.

The real time scroll bar can be altered in the same way. Select and drag the Horsepower variable from the Variables window into the scroll box. This replaces the current real time variable but doesn't change the point cloud the way an axis variable change does. Now, if the value range of horsepower ratings for the automobiles is scrolled up (Figure 4-B), the size of engines as well as the horsepower ratings decrease. That's logical. If the horsepower value range is decreased further (Figure 4-C), fewer automobiles share the same set of characteristics until there is only a select group scattered along the Acceleration axis. If the elevator is moved to the top of the scroll bar, the value range is emptied, and no points are shown.

This set (Figure 4-C) is a selection of small (low on the Cu/In axis), fuel efficient (low on the Gal/Mi axis, low performance (high on the Acc/0-60 axis) engines that share similar horsepower ratings. They are Volkswagen, the VW 1131 Sedan, VW Type 3, VW Super Beetle, VW Rabbit Diesel, VW Dasher Diesel. The Honda Civic and Honda Civic CVCC, Chevrolet Chevette, Fiat 128, and Toyota Corona are the other points shown. The speed devil of the group is the Corona. It is the point at the lowest end of the Acc/0-60 axis. A plain vanilla VW pickup at the top of the axis takes the longest amount of time to reach 60mph and is the group slow poke.

MacSpin handles any straight ASCII text file. A dataset can be created using MacWrite and saved as a Text Only file. The first line should contain the dataset's variable names or abbreviations. It should be

followed by one line for each event. Variable value should be separated by one blank space. Record and dataset size could not be determined from the beta release but should be adequate enough to handle most microcomputer datasets. A dataset can be edited with the MDS Editor or another text editor. I identified an outlier from the main cloud display of another MacSpin dataset which contained information on the computer industry. I opened SideKick's Notepad + on top of MacSpin's display of the industry dataset. I searched and found the event name and reviewed the event's variables. A variable value contained a misplaced decimal point. I corrected the entry, saved the dataset, and closed Notepad + . When Notepad +'s window disappeared, MacSpin had adjusted the point display to reflect the corrected dataset. The outlier had disappeared.

Real Numbers Don't Eat Quiche

This preview of MacSpin is based on a beta release demonstrated before the American Statistical Association in Washington, D.C. last August. It is not a review. MACazine only reviews released products available for sale. Nevertheless, I

was eager for two reasons to give you a first look at this new Macintosh program. MacSpin is an original. It is a landmark program, completely unlike any other microcomputer statistical analysis program available on the market today. There are good statistical programs for the Macintosh, programs like Data Desk from Data Desk, Inc., Stats ToolKit from Sof-Ware Tools, StatView from BrainPower, Inc. (reviewed in MACazine August, 1985), Stat fast from Statfast, and StatWorks from Heyden & Son. They are all designed to do advanced statistical and discriminative analysis. MacSpin is designed to do the same thing in a unique way. Instead of grinding numbers into hash and bones, MacSpin communicates large amounts of complex, numeric information to the user as visual information.

MacSpin turns a difficult task, statistical analysis, into a simple task, looking and thinking. If the Macintosh is to be a medium for creative thinking, it will need new ways of doing old things. It will need programs that excite the mind to imagine, to think. Computers will never think. They will help us think better, but they will never think for us. Computers designed to do things, things like crunching and sorting great magnitudes, need a fu-

ture with artificial intelligence and knowledge systems programs. The Macintosh needs more programs like MacSpin that include human thought, imagination, and curiosity in their algorithms.

MacSpin
D2 Software
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© —Michael Holloway

Michael Holloway is a Contributing Editor for The MACazine. He can be reached on CompuServe 76324,2255.

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ON THE ROAD

This is the first part of a two-part story on Macintosh software developers in Southern California, written by our guest editor, John Lincoln from Santa Barbara, California. In his own business John uses his Mac basically as a terminal emulator to communicate with his overseas operations.—Ed.

When Apple Computer launched the Macintosh in January, 1984, the company's declared aim was "to reproduce the Apple II phenomenon." The linchpin of this strategy was to stimulate development of software by independent programmers—the aim being, to generate the volume and variety of applications required to make the Mac a best-seller.

Who are these people Apple is counting upon to make good on the promise of the Macintosh? I wanted to know.

In the town where I live, I looked around, and had no trouble finding several authentic Macintosh software developers. These are people whose fascination with the Mac goes beyond what may be considered natural. They devote their time, their attention, and their money to transposing ideas into programming code. The code turns our Macs into "software players" for our fun and profit.

What keeps them at it? I wanted to know. Who are these people, who give us the tools?

ExperTelligence

Denny Bollay talks about the Macintosh with an excitement that's palpable. It's full of action and importance. The action is a struggle between a bunch of good guys with Mac on their side, and some other guys, who have sided with an inferior technology.

"The Macintosh is where things are going," says the president of ExperTelligence, who has been absorbed in the field of Artificial Intelligence (AI) since 1975. "Other computers are in a 'previous generation' [that] don't even count—might as well not exist."

The Mac is an extremely innovative computer, and it deserves innovative software. Apple gets an A+ for the human

interface; an A+ for the packaging of the system; and an A+ for marketing the system."

Sitting in his sleek offices in Montecito, California, Denny talks about the two namesakes of his company—"expert systems" (computer programs that mimic the problem-solving and goal-oriented thought processes of human experts)—and the field such systems open up: "Artificial Intelligence."

All programs for Artificial Intelligence (AI) are written in special languages—ordinarily, LISP or Prolog—and, so far, have run only on very expensive machines. Denny's pride and joy is one such computer—the Symbolics 3600 LISP machine at ExperTelligence headquarters.

His goal for years was to make LISP—and therefore, AI—available on a microcomputer at a price anyone could afford. Years ago, he visited a computer dealer to buy an IBM PC for the purpose, but he found the machine so miserably slow, and its screen resolution so poor, that he couldn't bring himself to write the check he had in his pocket. And then, on the first day the Macintosh was released, he saw in it the fulfillment of his dream.

"The Macintosh is not a piece of hardware," he explains now. "It is a piece of software. What makes the Macintosh unique has nothing to do with its 68000 pro-

cessor, which has been available since about 1977. It's the beautifully crafted software [stored in ROMs], on top of which you can add your own genius."

Of course, the hardware holds a fascination of its own, too. While other computers are known by their hardware specifications, he says, the Mac is designed around a "virtual" spec, which allows for tremendous expansion and upward development. Its 68000-type architecture, for example, can operate with any size of memory, from megabytes to multi-megabytes.

"By comparison," Bollay observes, "the IBM PC is just a hunk of iron."

ExperTelligence can boast one Macintosh for each of its 22 employees, plus eight Lisas, and, of course, the Symbolics 3600.

The firm's first product, "ExperLogo" (\$149.95), came out in December, 1984. An enhanced version of the familiar programming language, ExperLogo is said to offer features beyond those associated with Logo's traditional, educational role in the schools. Its high-speed "bunny graphics," list processing, 3-D navigation, and other features are set in the Mac user interface of pull-down menus and multiple windows.

Bollay calls ExperLogo "a fun, easy to use programming language with the func-



Denny Bollay relaxes with the two computers he "introduced" to each other—the Symbolics 3600 LISP machine (terminal), and the Apple Macintosh. His firm, ExperTelligence, has just released "ExperLisp"

to run on the Mac. Until now, LISP, the language of "Artificial Intelligence," was available for the development of "expert systems" only on high-priced hardware. Today, it runs on the Mac.

tion of a powerful development language . . . equally useful in the home, school and business."

But it is in ExperLisp that Denny's vision of utilizing the beauty and the power of the Mac lies.

"LISP is to the programming world what the Macintosh is to the hardware world," he says. "To go back to programming in some other language than LISP would be like going back to punch cards, and trying to feed them into some big machine. It's an anachronism—it's history."

As a high-level language, he says, "LISP is one step beyond FORTRAN, ALGOL, C, and ADA—not the ultimate step, but the best thing we've got so far."

Bollay ticks off the advantages of LISP: "One—it's dynamically linked, which means that if I find an error in de-debugging a program, I can go back and re-compile that little section of the program, back up one stack frame, and continue execution, all in a few seconds—it takes me about 20 minutes to do that on a Lisa in Pascal.

"Two—it handles its own 'garbage collection', so the user doesn't have to worry about that.

"Three—it handles very complex 'tree

structures', which are important for Artificial Intelligence.

"Four—our version [ExperLisp] is a compiled version, so you get all the speed of a compiler, but all the advantages of incremental de-debugging and re-compilation."

Writing ExperLisp for the Macintosh was no small task. "We had two development tools," he says. "We wrote our compiler in LISP on the [Symbolics 3600] LISP machine. And we hand-crafted the 'built-ins,' which are underneath the LISP, using Apple's development environment, partially in Pascal and partially in assembly code. It actually took two development efforts—one to develop a LISP compiler in LISP, and the other, to generate 68000 native code—so that, when the two got mixed, we had a LISP system."

Bollay faults Apple only for the Mac's Pascal development environment, which, he says significantly slowed development of ExperLisp. "In hindsight, I have to wonder whether we would have done better to write the whole thing on the Symbolics, and taken it straight across." More significantly, however, he appreciates the full value of what Apple has packed into the Mac: "the routines they provided—QuickDraw, window routines, memory

management, resource management—all of that was given to us for nothing. It was given to us on a plate. They said, Just 'call' this.' And all the math functions were just handed to us on a platter. The text editing, too. These probably sped up development time by a factor of two. None of this is standard on other machines."

With two major Macintosh products now in the marketplace, what's next for ExperTelligence?

Denny answers without hesitation, "Our next phase of development is 'expert systems'—knowledge-based systems on the Macintosh—which was the reason we wrote ExperLisp in the first place. When the Mac first came out," he explains, "there was a huge window of opportunity for software development. That window is closed now. The second window of opportunity is open right now, and that is Artificial Intelligence. Every 'how-to' book on the market can now be put into software, using ExperLisp. Anyone wanting to get into the second window can get a copy of ExperLisp, and get started."

ExperTelligence
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Maitreya Design

The entrepreneurial emblem of our times may be of two young men working in a California garage, turning their vision into a high-tech marvel that sets the world on its ear.

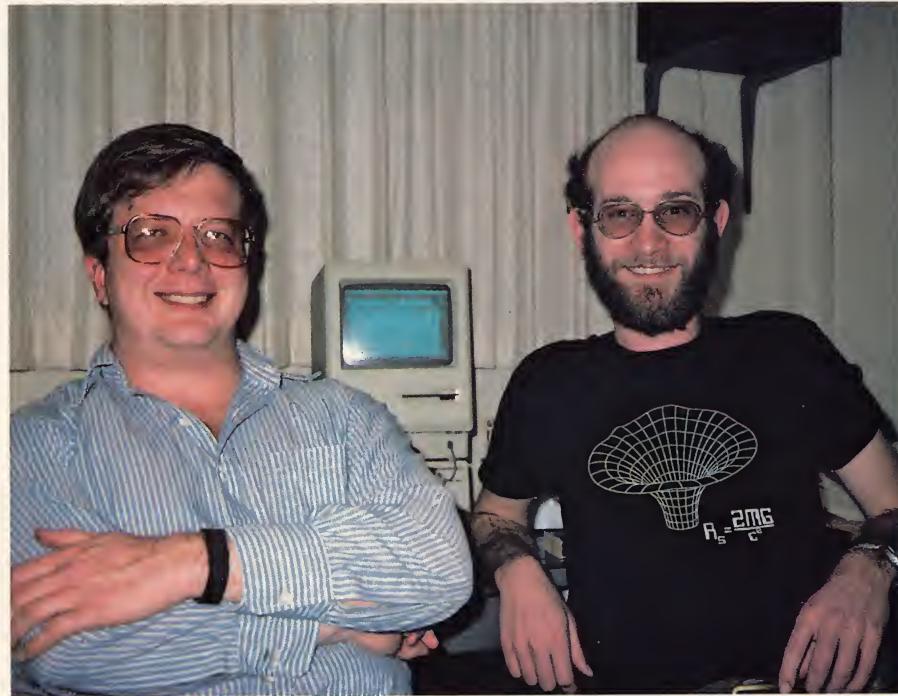
For David Dunham and Forrest Johnson, the lure of the Mac and the micro industry is irresistible. They have taken a stand on themselves as successful Mac software designers—and now it's a matter of hard work and talent.

They do business under the name "Maitreya Design"—the name means "future Buddha" in Sanskrit, according to David, who says they chose it "because it's an interesting sounding name that wasn't already taken."

And they have already launched David's first Mac program, a "shareware" utility called "DiskInfo" that you can download from CompuServe's MAUG. All they ask is a courtesy ten dollar payment.

"DiskInfo" is a little gem that operates as a desk accessory on the Mac. Using it, you can show the files on your current disk; show the amount of space available on your disk; show how much free memory is available; delete files from your current disk; and read scrapbook files from other disks.

David wrote "DiskInfo" in Aztec 'C' on a 512K Mac with a Corvus hard drive. He



David Dunham (black T-shirt) and Forrest Johnson are fully invested in their Mac software development business—and the programs David writes are first-rate. If you're using a Mac utility called "DiskInfo," chances are good that you still owe

them the ten dollar "shareware" fee requested on the program's title screen. Their next release will be a role-playing, text adventure game. It will not be released as shareware.

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MACazine Readers Will Purchase over 200,000 Macintosh™ Software Packages in 1986

Business Applications Emphasized

The results of a recent survey of Macazine readers point to a strong market for Macintosh software sales in 1986. The question, "Which (software packages do) you plan to buy in the next 12 months for use on your Mac(s)?" yielded the following projected purchases based on a minimum circulation of 75,000 copies per month in 1986:

Spreadsheet	12,750
Accounting	10,500
Data Management.....	16,500
Integrated Package	25,500
Graphics (Drafting)	13,500
Graphics (Business)	6,750
Graphics (Art)	7,500
Communications.....	24,750
Networking	12,000
Home Entertainment.....	14,250
Investment/Finance	13,500
Desktop Accessories.....	20,250
Sound/Music.....	10,500
Other.....	12,000

Total Software Packages Readers Plan To Purchase in 1986	200,250
--	---------

Based on an average unit price of at least \$160, which is a current market estimate based on actual retail prices (more expensive packages are emphasized in readers' purchase plans), the total estimate market value for 1986 is placed at over 32 million dollars. What is equally impressive is the emphasis placed on sophisticated business application software. Integrated Packages alone, assuming an average unit cost of \$300, will account for over 7 million dollars in reader purchases next year.

Over 140,000 Peripherals Will also be Purchased

Macazine readers also plan to purchase a substantial number of hardware peripherals and accessories for their Macintosh computers in the coming year. The following projections were taken from the same reader survey:

External Disk Drive	14,250
Modem	34,500
Video Digitizer.....	22,500
Letter Quality Printer.....	9,750
Dot Matrix Printer	2,250
Laser Printer	15,000
Local Area Network.....	9,750
Mainframe Link Hardware.....	4,500
Joystick/Other Mouse.....	15,000
Workstation	6,000
Other.....	9,750

Total Peripherals and Accessories Readers Plan to Purchase in 1986	143,250
--	---------

Although it is harder to place a dollar value on planned reader expenditures, the printer market should be worth at least 26 million dollars, assuming a unit cost averaging at least \$1,000 for each printer purchased (this is a very conservative estimate). External disk drives should be similarly be worth 14 million dollars in purchases. The other categories, although more difficult to estimate, should be worth at least 12 million dollars, with communications hardware accounting for the bulk of expenditures. The total market for peripheral products will be worth over 50 million dollars in the coming year.

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chose Aztec 'C' because, at the time, it was the only 'C' advertised as "complete"—with full toolbox access to the Mac's ROMs, and the ability to allow a programmer to write a stand-alone application.

When David bought his Mac a year ago, Apple was recommending that you use a Lisa to develop your program, and a Mac to run it—an expensive arrangement for an solo programmer long on talent but short on capital.

"I never saw the point in compiling my program on one machine, converting it over to the Macintosh format, and running it on a separate machine," he says. "I like to de-bug on the same machine that I'm developing on."

Dunham is an artist with code, but not much interested in business. He wanted to spend his time programming, not marketing. His partner, on the other hand, likes the challenge of business, and this is the foundation of their partnership.

Writing programs takes time, but making money from them takes even longer. They're determined to succeed, despite the odds stacked against them.

"They say it costs a million dollars to put software onto the market," Johnson says. "We're trying to prove that isn't so."

For all their good work and generosity

in offering "DiskInfo" as shareware, they have so far been disappointed with the results. "It's been downloaded more than 500 times," David said recently. "And it's been taken by several User's Groups as if it were in the public domain. But the rate of payment has been less than one per cent." . . . So much for shareware . . .

Don't expect to find Dunham's second Mac utility—called "File Info"—on the shareware circuit. It has been picked up by the publisher Dreams of the Phoenix, reportedly to be included on an upcoming release of "Quick and Dirty" Mac utilities.

With an ever-more deft hand at programming the Mac, Dunham and Johnson are deep into the development of their third and most ambitious Mac program yet. It's a role-playing, text adventure game—sort of a cross between Wizardry and Zork.

As they demonstrate the opening sequences of their new game, they both speak at once, excitedly, their attention rapt on the Mac's screen. They are thrilled as their visitor tries out their parser with keyboard commands. Their problems, if they have any, fade away, and they are with me every step of the way, leaping through sheets of flame, climbing a ladder, swimming a great pool.

That was how I found them, and also how I left them. Committed up to here.

I asked David how a beginner should get started with programming on the Mac, and he said, "The best way to learn . . . is by doing. Once you get into your learning curve, there's really nothing out there."

Maitreya Design
P.O. Box 1480
Goleta, CA 93116
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Next month we'll look at two other developers and see how they're doing.

—John H. Lincoln

John H. Lincoln is a freelance writer specializing in Apple computers. He lives in Santa Barbara, Ca., with his family and their Macintosh.

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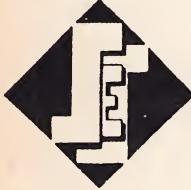
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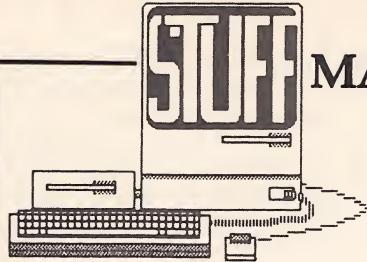
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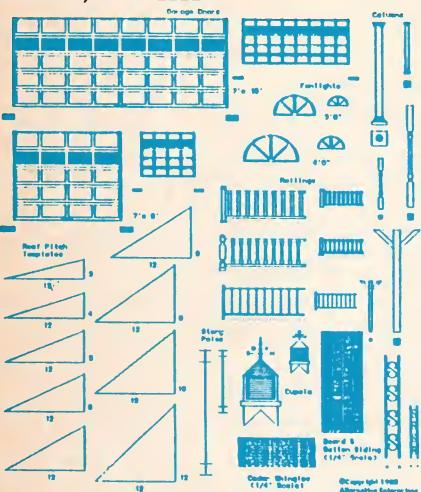
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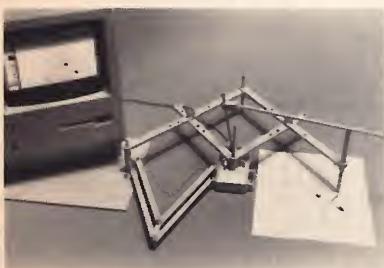
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Housebuilder was created by a professional building contractor to aid in preparing designs and plans for prospective customers. There are 14 MacPaint reproductions of numerous architectural features (in two different scales) which, using Cut and Paste, can be used to produce plans and drawings for various construction projects. You can show before and after designs for comparison, and you can modify each design easily and quickly. Housebuilder is designed to enhance the professional drafting which must be done for each building or remodeling project. The manual is organized and well-thought out, with explicit instructions on how to use various MacPaint tools to maximize your use of Housebuilder. Alternative Enterprises includes Drafting Paper ($\frac{1}{8}$ " and $\frac{1}{4}$ " scales) on disk where you begin all your creations.

Make Another Copy (M.A.C.)

Innovative Products
Box 1233
Oak Brook, IL 60522-1233
\$49.95 + \$4.50 shipping



Make Another Copy is a tracing device which will help you replicate anything you can point at. With a quick change in the two wing nuts, you can change the size of your artwork image: enlarge it, reduce it, or retain the size of your original. M.A.C. allows you to have complete control over the mouse functions while tracing. Now

you won't be limited to clip art; you can trace illustrations from books, magazines, photographs and comic books. It's available for the Apple IIe, IIc and Macintosh, and comes with a ten-day money back guarantee and a 60 day warranty against defective parts.

RealArt

Electric Cottage Industries
Box 217
Spooner, WI 54801-0217
(715) 635-3516
\$29.95



RealArt Volume I contains a collection of birds, animals and outdoor scenes painstakingly created in MacPaint documents by wildlife artist, Suzanne Vergin. If you're looking for high-quality clip art, we suggest you explore RealArt.

LisaStuff

Macintosh XL Migration Kit
Apple Computer, Inc.
20525 Mariani Ave.
Cupertino, CA 95014
(408) 973-2222

Through May 31, 1986, the Mac XL Migration Kit will be available for Lisa 7/7 version 3.1 software owners who want to switch permanently to the Macintosh environment. (If you have version 3.0, you can get the 3.1 upgrade at no charge from authorized Apple dealers.) As you know from reading Dave Redhead's *Orphan Support*, the kit enables users to transfer Lisa documents to a Macintosh disk and then finish the software conversion in the Macintosh environment. Conversion tools available include: LisaWrite to MacWrite and MS Word; LisaDraw to MacDraw; Lisa Project to MacProject; LisaCalc to MS Excel and Lotus Jazz. If you have installed a Mac XL Screen Kit, you will have to do the Lisa part of the conversion on another Lisa or Mac XL office system. The Migration Kit costs \$30; the Migration-Lotus Package costs \$450; the Migration-Microsoft Package costs \$450.

Medical

TessSystem One
Tess Data Systems, Inc.
17070 Red Oak Drive, Suite 403B
Houston, TX 77090
(713) 440-6943
\$1995

TessSystemOne is an integrated medical office package that incorporates accounts receivable, patient files and patient appointments and generates practice analysis reports for a single doctor office. If used on a 10 megabyte hard disk drive, it can handle up to 20,000 patients. By using the Transaction Entry module (the heart of TessSystemOne), you can define data dictionaries of procedure codes, diagnosis codes and locations of treatment. From the Entry module you can access the other modules, and you can easily view all modules on screen simultaneously. The analysis reports include aged accounts receivable for each patient, amount generated at each location of service, monthly business recap and an analysis by procedure detailing the amount generated and the number of times it was performed during the current month. For the 512K Mac with a hard disk drive, or the Mac XL.

Productivity

Biomedical Research Chart Tool Kit
Sof-Ware Tools
P. O. Box 8751
Boise, ID 83707
(208) 343-1437
\$99

Do you need a package to help you record numeric research data, then translate the data into graphic formats and statistics? The Biomedical Research Chart Tool Kit used with Microsoft BASIC 2.0 allows users to generate random number files for experimentation and simulation purposes. You can have scatter plots with standard error bars plotted; three-part trend chart overlays; trend charts with standard error bars plotted; histograms with optional normal distribution overlay; and bar charts with standard error bars plotted. This program runs on a 128k or 512K Macintosh with one or two drives.

Notes

Layered, Inc.
85 Merrimac St.
Boston, MA 02114
(617) 423-9041
\$89

Notes is a desk accessory package of online help, advice, tips and templates to facilitate your use of Jazz. You can quickly refer to information from any part of Jazz; get help on how to use the various functions; find tips on debugging, writing, planning and documenting spreadsheets; create custom notes to document your work; and use the 11 Business Companion Templates. This is a handy DA for Jazz users.

PageMaker Technical Support Service
Aldus Corporation
616 1st Ave. Suite 400
Seattle, WA 98104
(206) 441-8666
\$75/year

In January, Aldus began expanded and extended technical support service for PageMaker customers which may begin after the first 45 days of free telephone technical support if you subscribe. The expanded service includes 24-hour support for in-depth answers to your questions and suggestions for up to five hours during the contract period. At no extra charge, you will receive all PageMaker upgrades released during the term of your contract and a subscription to Aldus' technical newsletter which includes a column written by Aldus engineers, analysis of emerging technologies, information about PageMaker compatibility with hardware and software, and future PageMaker features and capabilities. You'll be eligible to purchase future releases of PageMaker at a special subscription rate. We recommend that anyone using this hot desktop publishing product sign up.

Teach Yourself Excel

American Training International, Inc.
12638 Beatrice St.
Los Angeles, CA 90066
(213) 823-1129
\$75

If you're looking for guidance in using Microsoft's Excel, Teach Yourself Excel may be just the thing. It is a two-disk interactive training program which teaches you how to set up a worksheet, enter data and formulas, prepare memos, graphs and integrate documents. ATI suggests that Teach Yourself Excel can help you learn Excel in less than two hours.

Typeface Collection

Adobe Systems, Inc.
1870 Embarcadero, Suite 100
Palo Alto, CA 94304
(415) 852-0271
\$375/single-printer package; \$375/multi-user license

Adobe Systems, the developers of PostScript, are releasing downloadable typefaces on floppy disks which Macintosh users can install with the Font/DA Mover on all PostScript laser printers ((including Apple LaserWriter, Linotype Linotronic 100 and Linotronic 300 imagesetters). Once installed in your PostScript printer, you can select fonts from the pull-down menu. More than one typeface can reside in a PostScript printer at one time, depending upon the typeface and specific printer you are using. Initially, there will be twelve typeface packages available for \$185 each; a package will usually contain four typefaces belonging to one family (e.g., ITC Garamond Light, ITC Garamond Bold, ITC Garamond Light Italic, and ITC Garamond Bold Italic). Adobe plans to release about twenty-five downloadable typefaces (six packages) each quarter this year. This is a definite plus for all Macintosh users involved in publication production.

WillWriter

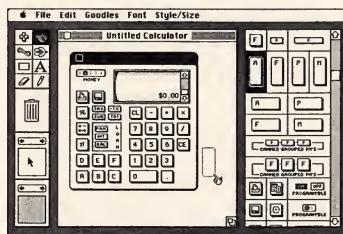
Nolo Press
950 Parker St.
Berkeley, CA 94710
(415) 549-1976
\$39.95

Haven't we all been taught that legal documents should be complicated, unreadable, incomprehensible, and altogether baffling? If you're doing some personal financial planning, don't neglect the all-important will which protects the people you care about. Nolo Press, pioneering publisher of self-help legal guides, has produced its second computer-related book, WillWriter (the first was Legal Care for Your Software). WillWriter is a software/book package. The book explains the legal concepts and conditions involved in making a will and provides information on important aspects of estate planning, including trusts and probate avoidance methods. The software guides you step-by-step through each section of the will. Once written on your 128K, 512K Macintosh or Lisa running MacWorks, you can easily update and amend your will without having to visit a law office. Nolo Press provides customers with a 30-day money-back refund policy and informs users of significant changes in the law and enhancements to the program.

Utilities

Calculator Construction Set

Dubl-Click Software
18201 Gresham St.
Northridge, CA 91325
(818) 349-2758
\$99



For those of you want to create customized Desk Accessories, check out Dubl-Click's Calculator Construction Set. More than a calculator construction set, this package will enable you to create clocks and calendars too. You can test them while under construction and you can alter them after you've installed and used them. There are scores of mathematical, scientific, business and conversion function keys and you can define your own programmable keys. Where else can you get a calculator that gives you a resizeable, scrolling paper tape that prints to the ImageWriter, clipboard or a MacWrite text file? You don't have to be a programmer to drag parts into a calculator shell and wire the functions; anyone with a 128K, 512K Macintosh or Mac XL can build these Switcher-compatible DAs.

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 Yes No
2. How much in total do you expect to spend, or authorize the purchase of, in the next 12 months, for your own and/or your company's or organization's use?
Please answer for the Macintosh and all other personal computers owned or used.
Please check only one answer for each category.
3. Are you currently employed with a government or non-government organization?
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 Employed with a non-government organization
 Not currently employed

4.*What is the approximate total gross sales or revenues for 1983 of your entire company, including all plants, divisions, branches, and subdivisions?

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